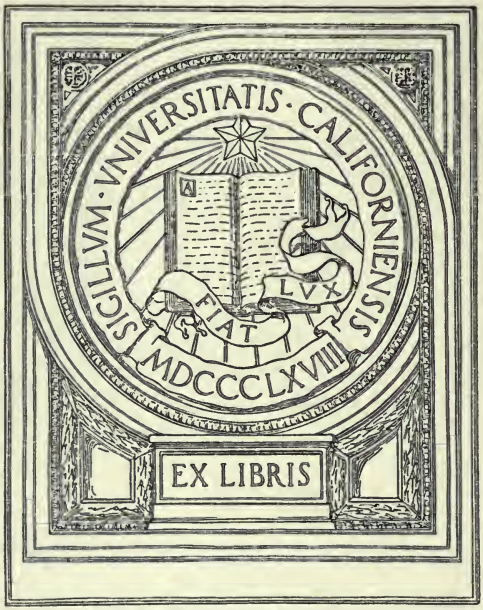
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Money and Bimetallism

A Study of the Uses and Operations of Money and Credit ; with a Critical Analysis of the Theories of Bimetallism, and a Study of Symmetallism, and of the Tabular Standard of Value

BY

Henry A. Miller

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MONEY AND BIMETALLISM

MONEY AND BIMETALLISM

PART I

OF THE NATURE, USES, AND VALUE OF MONEY

CHAPTER I

WHAT IS MONEY?

§ 1. Our money, at present, consists, mainly, of three kinds.

(1) Gold money.—A piece of gold metal stamped or coined and given the denomination of a certain number of dollars,—five dollars, ten dollars, and twenty dollars, half-eagles, eagles, and double-eagles.

(2) Paper money.—A piece of paper upon which is stamped or engraved a promise to pay a certain number of dollars, issued in the form of a promissory note by the Government or by a national bank. As this money is really a credit, it would be more proper to call it credit money, but the name of paper money has become so universal that it will be best to still adhere to it.

(3) Silver money.—A piece of silver metal stamped or coined and given a certain denomination, one dollar, half-dollar, quarter of a dollar, and a dime, the stamped or coin value of this silver money being much greater than the actual market value of the silver metal contained in the coin, but, being accompanied by either the express or implied promise of the Government to pay or redeem it, in gold, dollar for dollar, at its coined or mint value, it is current at its coined or mint value. Our silver certificate, being nothing more than a warehouse receipt certifying that a certain number of silver dollars are on deposit in the United States Treasury, which dollars will be delivered to the holder of the certificate on demand, are virtually the same as the silver dollars, and will be so considered; and the fractional silver currency, being governed by the same principles as the silver dollar, will also be considered as silver dollars.

§ 2. The metal used as money, and which is coined for use as such, is a commodity. After being coined for use as money it is still a commodity, and remains so, and it still is and remains the same commodity it was before being coined. Coining does not change its character as a commodity in any respect. It merely certifies to the weight and fineness of the metal contained in the coin. Uncoined metal is called bullion, but calling it bullion does not change the character of the metal; it still remains the same commodity. Coined metal is now called money, but calling it money no more changes its character as a commodity than the name of bullion

changes the character of the metal as a commodity; whether coined or uncoined, whether called bullion or money, it remains and is the same commodity.

A brief glance at the history of the introduction of the use of money will make all this perfectly plain. Aristotle [1] gives the following account:

"Now it is plain that barter could have no place in the first community, that is to say, in the household; but must have begun when the number of those who composed the community came to be enlarged; for the former of these had all things the same and in common; but those who came to be separated had in common many other things which both parties were obliged to exchange as their wants arose. And this custom of barter is still preserved amongst many barbarous nations, who exchange one necessary for another, but do nothing more; for example, giving and receiving wine for corn, and the like in other such things. This sort of barter then is not contrary to nature, nor yet is it a species of money-getting; but it is necessary in order to complete that independence which is natural. From this barter, however, arose the use of money, as might be expected; for as the needful means for importing what was wanted, or for exporting a surplus was often at a great distance, the use of money was of necessity devised. For it is not everything which is naturally useful that is easy of carriage; and for this reason men invented among themselves, by way of exchange, something which they should mutually give and take, and which being really valuable in itself, might easily be passed from hand to hand for the purposes of daily life, as iron and silver, or anything else of the same nature. This at first had a fixed stand-

[1] *Politics*, Bk. I., chap. ix.

ard simply according to its weight or size; but in process of time they put upon it a certain stamp, to save the trouble of weighing, and this stamp was affixed as a sign of its express value."

Adam Smith, in his work entitled *Wealth of Nations*,[1] gives the following history of the introduction of the use of money:

"But when the division of labor first begun to take place, this power of exchanging must frequently have been very much clogged and embarrassed in its operations One man we shall suppose has more of a certain commodity than he himself has occasion for, while another has less. The former consequently would be glad to dispose of, and the latter to purchase, a part of this superfluity. But, if this latter should chance to have nothing that the former stands in need of, no exchange can be made between them. The butcher has more meat in his shop than he himself can consume, and the brewer and the baker would each of them be willing to purchase a part of it. But they have nothing to offer in exchange, except the different productions of their respective trades, and the butcher is already provided with all the bread and beer which he has immediate occasion for. No exchange can, in this case, be made between them. He cannot be their merchant, nor they his customers; and they are all of them thus mutually less serviceable to one another. In order to avoid the inconveniency of such situations, every prudent man in every period of society, after the first establishment of the division of labor, must naturally have endeavored to manage his affairs in such a manner as to have at all

[1] Bk. I., chap. iv.

times by him, besides the peculiar produce of his own industry, a certain quantity of some one commodity or other, such as he imagined few people would be likely to refuse in exchange for the produce of their industry.

"Many different commodities, it is probable, were successively both thought of and employed for this purpose. In the rude ages of society cattle are said to have been the common instrument of commerce; and, though they must have been a most inconvenient one, yet in old times we find things were frequently valued according to the number of cattle which had been given in exchange for them. The armor of Diomede, says Homer, cost only nine oxen; but that of Glaucus cost an hundred oxen. Salt is said to be the common instrument of commerce and exchange in Abyssinia; a species of shells in some parts of the coast of India; dried cod at Newfoundland; tobacco in Virginia; sugar in some of our West Indian colonies; hides or dressed leather in some other countries; and there is at this day a village in Scotland where it is not uncommon, I am told, for a workman to carry nails instead of money to the baker's shop or the alehouse.

"In all countries, however, men seem at last to have been determined by irresistible reasons to give the preference, for this employment to metals above every other commodity. Metals can not only be kept with as little loss as any other commodity, scarce anything being less perishable than they are, but they can likewise, without any loss, be divided into any number of parts, as by fusion those parts can easily be reunited again; a quality which no other equally durable commodities possess, and which more than any other quality renders them fit to be the instruments of commerce and circulation. The man who wanted to buy salt, for example, and had nothing but

cattle to give in exchange for it, must have been obliged to buy salt to the value of a whole ox, or a whole sheep, at a time. He could seldom buy less than this, because what he was to give for it could seldom be divided without loss; and if he had a mind to buy more, he must, for the same reasons, have been obliged to buy double or triple the quantity, the value, to wit, of two or three oxen, or of two or three sheep. If, on the contrary, instead of sheep or oxen, he had metals to give in exchange for it, he could easily proportion the quantity of the metal to the precise quantity of the commodity which he had immediate occasion for.

"Different metals have been made use of by different nations for this purpose. Iron was the common instrument of commerce among the ancient Spartans; copper among the ancient Romans; and gold and silver among all rich and commercial nations.

"Those metals seem originally to have been made use of for this purpose in rude bars without any stamp or coinage. Thus we are told by Pliny (Plin. *Hist. Nat.*, lib. xxxiii, cap. 3), upon the authority of Timæus, an ancient historian, that, till the time of Servius Tullius, the Romans had no coined money, but made use of unstamped bars of copper to purchase whatever they had occasion for. These rude bars, therefore, performed at this time the functions of money.

"The use of metals in this rude state was attended with two very considerable inconveniences: first, with the trouble of weighing; and, secondly, with that of assaying them. In the precious metals, where a small difference in the quantity makes a great difference in the value, even the business of weighing with proper exactness requires at least very accurate weights and scales. The weighing of gold in particular is an operation of

some nicety. In the coarser metals, indeed, where a small error would be of little consequence, less accuracy would, no doubt, be necessary. Yet we should find it excessively troublesome, if every time a poor man had occasion either to buy or sell a farthing's worth of goods, he was obliged to weigh the farthing. The operation of assaying is still more difficult, still more tedious, and, unless a part of the metal is fairly melted in the crucible, with proper dissolvents, any conclusion that can be drawn from it is extremely uncertain. Before the institution of coined money, however, unless they went through this tedious and difficult operation, people must always have been liable to the grossest frauds and impositions, and instead of a pound weight of pure silver, or pure copper, might receive in exchange for their goods an adulterated composition of the coarsest and cheapest materials, which had, however, in their outward appearance been made to resemble those metals. To prevent such abuses, to facilitate exchanges, and thereby to encourage all sorts of industry and commerce, it has been found necessary in all countries that have made any considerable advances towards improvement, to affix a public stamp upon certain quantities of such particular metals as were in those countries commonly made use of to purchase goods. Hence the origin of coined money, and of those public offices called mints; institutions exactly of the same nature with those of the aulnagers and stamp masters of woollen and linen cloth. All of them are equally meant to ascertain by means of a public stamp, the quantity and uniform goodness of those different commodities when brought to market.

"The first public stamps of this kind that were affixed to the current metals, seem in many cases to have been intended to ascertain what it was both most difficult and

most important to ascertain, the goodness or fineness of the metal, and to have resembled the sterling mark which is at present affixed to plate and bars of silver, or the Spanish mark which is sometimes affixed to ingots of gold, and which being struck only upon one side of the piece, and not covering the whole surface, ascertains the fineness, but not the weight of the metal. Abraham weighs to Ephron the four hundred shekels of silver which he had agreed to pay for the field of Machpelah. They are said, however, to be the current money of the merchant, and yet are received by weight and not by tale, in the same manner as ingots of gold and bars of silver are at present. The revenues of the ancient Saxon kings of England are said to have been paid, not in money, but in kind, that is, in victuals and provisions of all sorts. William the Conqueror introducd the custom of paying them in money. This money, however, was for a long time received at the exchequer by weight and not by tale.

"The inconveniency and difficulty of weighing those metals with exactness gave occasion to the institution of coins, of which the stamp, covering entirely both sides of the piece and sometimes the edges too, was supposed to ascertain not only the fineness but the weight of the metal. Such coins, therefore, were received by tale as at present, without the trouble of weighing."

The same author[1] says:

"These qualities of utility, beauty, and scarcity, are the original foundation of the high price of those metals [gold and silver], or of the great quantity of other goods for which they can everywhere be exchanged. This

[1] Bk. I., chap. xi., part 2.

value was antecedent to and independent of their being employed as coin, and was the quality which fitted them for that employment."

Robert Morris, in his report on coinage to the Congress of the Confederation, remarks as follows:

"It is not necessary to mention what is in everybody's mouth, that the precious metals were first used as bullion, and that the inconvenience of weighing and the difficulty of assaying introduced the practice of coining, in order that the weight and fineness might be known at the first view, and of consequence the value be instantly ascertained."

Prof. Francis A. Walker, in his work entitled *Money, Trade, and Industry*, pp. 4, 5, gives the following account of the introduction of tobacco for use as money in Virginia:

"Let us take an illustration from the history of Virginia. Tobacco early became the staple export of that colony. Since tobacco was in unfailing demand for shipment abroad, it was readily taken at the country store. Every planter brought his tobacco thither with perfect assurance, knowing that it would be taken as a matter of course. Every week or every month, the trader loaded up his teams, and sent his stock tobacco to the seashore, where, in the chief towns, it was exchanged against West India goods, dry goods, hardware, etc., imported from abroad. With these the teams returned loaded; and the planters took the rum, the molasses, the cloth, the boots, the tools they wanted, to the amount of the credit given them for their tobacco.

"Such a use of tobacco, however, did not make it money. The transactions thus far described were merely

instances of barter, notwithstanding that the foreign exporter, the Virginia importer, and the country storekeeper were all intermediaries between the tobacco grower and the planter who produced the rum and molasses of Havana, or the manufacturer of cloth, of boots, or of hoes in Old England.

"But the fact that tobacco was thus freely taken at the country store soon led to a further extension of its use in exchange which constituted it money. Since it was so freely taken at the store, in exchange for goods of every kind, it was freely taken between man and man throughout the community. The lawyer and the physician did not hesitate to receive their pay in tobacco, because tobacco was always good for groceries and dry goods; while the fact that tobacco was taken not only by the storekeeper but also by the lawyer and physician made the farmer who raised corn willing also to take it in exchange for his product.

"And so tobacco became money in Virginia."

From the history of money it plainly appears that the commodity which was selected for use as money was not so selected by any positive law or legislative act, but by the common consent of the people; that the article was so selected on account of some qualities connected with it which made it acceptable for use as money, and the reason for its adoption for use as money was the fact that it was a commodity possessing these qualities; that the precious metals were introduced into use as moneys in the same manner and for the same reasons (their peculiar qualities making them in a high degree suitable for that purpose), that the other commodities mentioned were introduced for that purpose;

that they were used as money long prior to any coinage, being first used in rude bars without any stamp or coinage; that they were so used by the parties dealing with each other, themselves weighing and assaying them, which were both troublesome and difficult; that these troubles and difficulties caused the origin of coined money at the mints; that the precious metals were not used as money because they were coined, but were coined because they were used, and were expected to be used, as money; that they are still assayed and weighed when used as money, the only difference being that in olden times they were weighed and assayed by the parties dealing with each other, and now they are weighed and assayed by government, and that coinage is nothing more than a certificate of the weight and fineness of the metal contained in the coin, just as woollen and linen cloth, tobacco, and other commodities are inspected and measured, and a certificate of the quality and quantity attached, and, therefore, coining a piece of metal does not change its character as a commodity any more than certifying the quality and quantity of other commodities changes their character as commodities, and that the metal still remains the same commodity in the state of coin as it was in the state of bullion.

A certain metal commodity, having been selected for use as money on account of its peculiar fitness for that purpose, if coining this metal would change its character as a commodity, it would no longer possess those peculiar qualities which made the metal a suitable commodity for use as money, and

which qualities were its principal recommendation for use for that purpose.

Coin can readily be converted into bullion at an insignificant expense by melting; if the coin were a commodity different from the metal contained in it, or different from bullion, this melting would not convert it into bullion. But melting does change the coin into bullion, and yet nothing is changed but the form of the metal,—changed from coin into bullion. The distinction, then, between coin and bullion, as commodities, is a mere matter of form, and that is the same as saying that there is no distinction at all.

Apply another test to it, where the form is not even changed, that is, when coin is exported. It is not exported as coin but as bullion and is considered the same as bullion. If coined money is a commodity different from the metal contained in it, what changes it in exportation to another commodity, bullion ? Nothing changes the coin as a commodity, because it always was the same identical commodity as the metal contained in it. It remained the same commodity after coinage as it was in the state of bullion.

I am well aware that in spending so much time in establishing this point, I lay myself open to the charge of wasting time in proving a fact which is everywhere admitted and which is taught by all political economists. My justification is the great importance of having firmly fixed in the mind, on account of the important consequences flowing from it, this fact, namely, that coined money remains,

after coinage, the same commodity as it was in a state of bullion, and whether the metal be coined or uncoined it is always the same metal. And, while it is true that all political economists are very careful to instruct their readers that money is a commodity and is governed by the same laws as any other commodity, yet many of them often ignore their own instructions, and treat metallic money either as no commodity at all, merely as a mere sign or ticket of value, or if they do treat it as a commodity, they treat it as a different sort of a commodity from the metal contained in it.

§ 3. Paper money, being a promise, on the part of some one, to pay, is a credit. As such, though intangible, it is property, an asset; in the hands of the holder it is an evidence of indebtedness against the maker, it is bought and sold, loaned and borrowed, the same as tangible property, and is therefore a commodity. As already stated this paper money is in the form of promissory notes, and paper money is called notes, and, as such, unless restrained by positive law, or, what is the same thing, by legislation, these notes to be used as money could be just as well issued by corporations, which have the power conferred upon them to issue promissory notes, or by individuals. The value of these notes used as money depends, like the value of all other notes, upon the solvency and credit of the issuer, or on these and the securities pledged for their payment. In its nature such a note used as money is the same as any other note of like form and tenor, and, except where changed by legislation

affecting it, such note used as money is subject to the same laws as other notes.

§ 4. Our silver dollars and silver certificates are anomalous in this, that their coined or mint value far exceeds the value of the quantity of the metal contained in the coin, yet they pass current at their mint value, or as of the same value as a gold dollar, which is what we mean when we speak of the mint value of the silver dollar. The value of the coin, over and above the actual value of the metal contained in it, is sustained by the implied or assumed agreement by the Government to maintain it at par with gold, and, for this purpose, to redeem it, the silver coin, in gold.

The value, then, of this silver coin is made up partly of the value of the metal contained in it, and partly by the said promise or agreement on the part of the Government, and it consequently partakes of the nature of both gold and paper money. In so far as the value of the metal in the coin is concerned it is the same as gold money, and in so far as the promise or agreement of the Government is concerned, it is credit money just like Government or national bank notes.

Our silver currency is neither wholly of one kind of money nor of the other, and hence it is a financial mongrel.

Finally, a commodity, either a piece of gold, or a promise in the form of a promissory note to pay a certain quantity of gold, or a piece of silver accompanied with a promise to make it equal with gold, is money.

CHAPTER II

WHAT MONEY IS

§ 1. MONEY is any commodity which may be selected and adopted by common consent, or by the authority of government, as a means to facilitate trade, the maintenance of government, and the administration of justice; and for these purposes it serves as an instrument for the satisfaction and discharge of liabilities, as a common consideration to support contracts, and as a measure in terms of which the prices of commodities and the extent and quantity of liabilities are expressed. The several purposes for which money serves are called the functions of money.

§ 2. It has already been shown that money is a commodity.

§ 3. In the origin of the use of money the commodity used for that purpose was selected and adopted by common consent, but it is now usual for the government to stipulate what shall be used as money, and if this money be accepted by the common consent of dealers in commodities then it is money. Paper money is issued either directly by the government or by banks by the authority of government. Money may still, however, be adopted and used as such by common consent, such as was

the gold money in use in California in the early days of the gold discovery there. The government generally, so far as relates to the precious metals, contents itself with providing for their coinage and their power of payment, and it should do no more; yet government may, by the coinage of both of the metals, silver and gold, at a fixed ratio, and by rating one of the metals in such ratio below its market value, drive such metal out of the circulation as money. Government cannot fix the values of the precious metals.

§ 4. Money as a means to facilitate trade, the maintenance of government, and the administration of justice. By the word "means" it is not intended to convey the idea that money is a mere intermediary or a mere sign; or that it is, as Adam Smith says, nothing but a "bill for a certain quantity of necessaries and conveniences upon all the tradesmen in the neighborhood"[1]; or that "they are a sort of tickets or orders," as laid down by John Stuart Mill.[2]

"'Go and barter your hat for money,' cried the shoemaker, 'then bring me that money, and the shoes shall be yours.' In other words, the shoemaker demands money, and with it he selects for himself in any shop any article which he desires to attain. That is the action and the essence of the use of money. A sale for money is thus half a transaction."[3]

This language is misleading, and is apt to convey the impression that money is nothing of itself, and

[1] *Wealth of Nations*, Bk. II., chap. i.

[2] *Political Economy*, Bk. III., chap. vii.

[3] Prof. Bonamy Price, *Currency and Banking*, p. 10.

hence many persons conclude that money need not be a thing of value. It is not correct to say that a purchase and sale for money is an incompleted transaction. A purchase and a sale of a commodity is a completed transaction. The authors above quoted do not mean to be understood that money is nothing of itself, and that a money transaction is but half a transaction, as I shall presently show from further quotations from the same works. The idea all of them wished to convey is, that the seller of goods does not wish to secure possession of money merely for its own sake, but for what he can procure with the money. This is no doubt true; but the purpose of the seller as to the use of the money has nothing to do with the transaction between him and the purchaser. The purpose of the seller may not be to exchange the money received for commodities different from what he sold; he may intend to purchase with the money the same kind of goods as he had sold. The purchaser of the goods may intend to sell those very goods again for money, and with the money so acquired purchase more goods of the same kind, yet no one would think that any one of these transactions was but a half-transaction. The truth is that the purpose of the seller in the use of the money received from his purchaser, on a sale of goods, does not enter at all in the transaction between him and the purchaser, nor does it prevent the transaction from being final and complete. The sense in which the word "means" is here used is that of an instrument, or a tool by the help of which the holder of money acquires title to the goods he

purchases. A railroad and a steamboat are mere instruments for the transportation of goods, that is, they are the means by which goods are transported from one place to another; yet no one would say that a railroad or a steamboat was nothing but a sign, or a ticket, or an order. In the same sense, then, is money a means by which a purchaser acquires title to property. If asked the question, how he acquired a certain commodity ? the purchaser would answer, by means of money; and while money is but an instrument or a tool it is nevertheless a commodity having in and of itself exchangeable value. A sale and purchase of goods for money is really an exchange of the goods for money; as much so as an exchange of a certain quantity of cloth for a certain number of shoes. And this is what the authors above mentioned really mean, as will appear from the following quotations from their respective works. Adam Smith:

"But, when barter ceases, and money has become the common instrument of commerce, every particular commodity is more frequently exchanged for money than for any other commodity. The butcher seldom carries his beef or his mutton to the baker or the brewer, in order to exchange them for bread or for beer; but he carries them to the market, where he exchanges them for money, and afterwards exchanges that money for bread and for beer." [1]

J. S. Mill:

"People are not usually said to buy or sell money.

[1] Bk. I., chap. v.

This, however, is merely an accident of language. In point of fact, money is bought and sold like other things whenever other things are bought and sold for money. Whoever sells corn or tallow, or cotton, buys money. Whoever buys bread, or wine or clothes, sells money to the dealer of those articles." [1]

Bonamy Price comes nearer to a correct expression of the fact than either of the others, for he shows that the exchange is really for the precious metals, that is, the metal contained in the coin is exchanged. However, the other authors, undoubtedly, by " money " mean the precious metal contained in the money. Bonamy Price says:

" From this fact it necessarily follows that to sell property and to receive in the place of it golden coins, money, is no increase of riches. It is an exchange of two equal quantities of wealth, of a precious metal for some other article. In the estimation of the two parties to a purchase, the coin is worth the property, and the property the coin; and that is the whole of the matter." [2]

The common definition of money is that it is a medium of exchange. This definition, however, is altogether too narrow. Prof. F. A. Walker, in his work entitled *Money, Trade, and Industry*, p. 4, says, that this " term is somewhat vague for exact definition, yet, as this phrase is commonly understood, it is correct." Unfortunately, he does not explain how the phrase is commonly understood, and we are as much in the dark as ever. Money facilitates

[1] Bk. III., chap. viii. [2] P. 6.

the production and the manufacture of commodities, as well as their exchange; and it also facilitates the maintenance of government, and the administration of justice. The word trade covers all commerce, production, manufacture, and exchange of commodities. Production and manufacture require labor, materials, machinery, etc. So far as these cannot be obtained by means of credit, they must be procured by means of money, or else resort must be had to the inconvenience of barter. How much superior and more convenient the use of money is for the purposes of the exchange of commodities is sufficiently explained in the history of money in the first chapter. Money, therefore, facilitates trade.

Every organized government requires money. Armies and navies must be created and maintained. Officials must be paid, and all the vast machinery of government kept in motion. All these require immense supplies and materials, and as it is impracticable for the government to levy and collect these supplies and material from the people in kind or produce, resort must be had to money, consequently, we find that government levies, assesses, and collects its revenues in money, and with the money purchases all its needed supplies, materials, and maintains its army, navy, officials, etc., so that money facilitates, and greatly facilitates, the maintenance of government. It is hard to conceive how justice could be administered in any country like ours without the use of money. Its fines, penalties, judgments, and decrees are fixed and determined in

terms of money, and must also be paid in money. Even in cases where there is a recovery of specific property, the decrees usually provide for damages and costs, and these are expressed in terms of money, and it would really be most difficult to express the amount of such damages and costs, in any other way.

§ 5. In the order above stated the first function of money is an instrument for the satisfaction and discharge of liabilities. Liabilities include debts, judgments, decrees, fines and penalties of courts of justice, taxes, claims arising out of decedent's estates, damages, etc. Generally, all these demands may be discharged by the payment of money.

The second function of money is as a common consideration to support contracts. It is not the only consideration which may be used for that purpose, but it is universally a sufficient consideration to support a contract, and this consideration relates not only to what are called cash transactions but to time contracts where the consideration is not to be paid until some future time. There is, however, little distinction between a so-called cash transaction and a time contract. A purchaser goes into a store to buy a certain article; he inquires of the merchant the price; the merchant informs him, and the buyer says "I will take it." This constitutes the contract, and from that instant the buyer is entitled to the article, and the merchant is entitled to the consideration, the amount of which is the agreed price, so that all considerations are paid after or subsequent to the contracting of the liability, and it

makes no difference in principle whether payment of the consideration is deferred for but an instant, or for years.

The third and last function in the order named is that money serves as a measure, in terms of which the prices of commodities and the extent and quantity of liabilities are expressed. This measure is usually called the measure of value. The sense in which the word "measure" is here used is that of an instrument by which things are measured, as, for instance, a yardstick. Now, money was never adopted as such a measure by virtue of any positive law or legislation, but was adopted and used as such a measure by the common consent of the commercial world; and, since liabilities are discharged by the payment of money, and the consideration for the purchase of commodities is usually expressed in money, it is but natural that the prices of commodities should be expressed in terms of money. The same authority which adopted the commodity money as a measure of value, could adopt any other commodity for that purpose; nor is it necessary that actual money, or coin, should be used for that purpose. As far back as the twelfth century the Bank of Venice originated; it was really a government institution. This bank was followed by the Bank of Genoa, and in later times by the Bank of Hamburg. The mode of doing business by these banks was to receive the coins which the depositor deposited, by actual weight, and give the depositor credit on the books of the bank for the amount. This credit could be transferred on the books of the

bank by the depositor to any other person. "The bank credits were divisible to every desirable degree, and they could be transferred with a readiness, speed, and safety, beyond all comparison superior to any mode of paying in coin." The amount of the credits, however, given to a depositor on the books of the bank was not expressed in terms of any denomination of coin in actual existence, but in the terms of an ideal money, that is, of an imaginary coin of a given weight and fineness, hence this money was sometimes called bank money, but most usually, money of account, because it existed only in the accounts of the bank. This money of account became by custom the money in which all notes and bills of exchange were made payable, and in which all accounts between merchants were kept, and consequently it became and was the common measure of values, in terms of which the prices of commodities were expressed. From the reign of Charles the Second there was no coin in England of the denomination of a pound coined, and those theretofore coined soon disappeared from circulation; yet, notwithstanding the fact that there was no such coin in existence, the pound, sometimes called the pound of account, but generally the pound sterling, and which had become an ideal coin or money, continued for many years the unit of the British currency, and, at least up to a comparatively recent period, if not down to the present day, notes and bills are expressed in pounds, shillings, and pence; accounts were kept in the same money, and prices were expressed in terms of it. The pound

originally, and while it was in existence, was a silver coin, and up to 1816 there was no coin in circulation corresponding to it. In 1816 the coinage of sovereigns began. The sovereign is a gold coin, which, when minted, is of the exact value of the pound sterling. Since 1816 the pound sterling has been represented in the coinage by the sovereign, and, even though accounts, etc., are kept in pounds, shillings, and pence, the pound, practically, means a sovereign.

Many persons seem to have an impression that the measure by which any commodity is measured makes or fixes the quantity of that commodity, and that money in measuring or estimating the prices of commodities makes and fixes such prices; but this is a mistake; neither of these measures have any such effect. A measurement of a commodity merely determines the number of times a given measure is contained in the commodity; and so when the price of a commodity is measured by money, dollars, for instance, the measurement merely determines how many times the value of a dollar is contained in the value of the commodity measured, and the number of times the value of the dollar is contained in the value of the commodity expresses the price of it; as, for example, in so measuring the price of a certain commodity, it is found that the value of a dollar is contained ten times in the value of the commodity, the price is then ten dollars. The buyer and seller may not at first agree upon the number of times a dollar is contained in the value of the commodity. The seller is likely to consider that

the value of the dollar is contained more times in the value of the commodity which is the subject of negotiations between him and the buyer than the buyer admits, but, if they come together and agree to a sale and purchase, they must agree upon the number of times the dollar is contained in the value of the commodity, and this number of times that the value of the dollar is so agreed to be contained in the value of the commodity is the price agreed upon. But there are important distinctions to be made between the measurement of the length, weight, or space of a given commodity and the measurement of the price of a commodity with money. When the length or weight of anything is measured, as, for instance, the measurement of a piece of cloth with a yardstick, the measurement of the thing or the piece of cloth measured, so long as the thing measured, as the piece of cloth, for instance, preserves its quantity or length, will, for all persons, times, and places, be the same. Not so with measurements of the value of commodities with money. Even if the commodity so measured in the value of money retain its physical identity, or its quantity, still the ascertainment of its value by such measurement or its price as declared by such measurement does not remain the same with all persons and at all times and places. The operation of measuring the value or price of an article with money is purely a mental process; there is no physical application of the measure to the aritcle measured, as there is in the case of the measurement of a piece of cloth with a yardstick. The

causes which interfere with the stability of the measurement of the value of a commodity may be summed up as follows:

(*a*) As every instrument of measure for the measurement of commodities has its standard for its extent, or dimensions, so the instrument of the measure of the values or prices of commodities (the value of the dollar) also has its standard for the extent or quantity of its value. This standard is the value of some commodity selected and used for that purpose; the result of this is that, ultimately, all prices of commodities are measured in the value of this standard. Now, this standard, being a commodity, may, for reasons appertaining to itself, fall or rise in value. If the standard rise in value the prices of commodities will be expressed in terms of less money, provided the instrument of measure, the dollar, is up to the standard, or on a par with it; on the other hand, if the standard fall in value, the prices of commodities will rise, providing, as already said, the instrument of measure is on a par with the standard.

(*b*) Again the instrument of measure of values, the dollar, in use may be depreciated below the value of the standard; if so, then, the prices of commodities will be increased to at least something near the percentage of such depreciation, that is, the value of the dollar in use, having diminished—the yardstick having been shortened (if I may be allowed to use such a comparison)—the number of times which it will be contained in the value of the commodity measured will be increased in proportion to the depreciation. On the other hand, if the value

of the instrument of measure be appreciated above the standard, the instrument of measure will be contained in the value of the commodity a less number of times in proportion to the appreciation, and the price of the commodity will apparently fall. In these ways prices may rise or fall on account of the fall or rise in the value of money, or of the standard. The causes which cause a fall or rise in the price of a commodity for reasons relating wholly to itself are as follows:

(*c*) The price of a commodity may be more or less according to its location; for instance, the price will naturally be less at its place of production than it will be at a place distant therefrom.

(*d*) The price of a commodity may rise in consequence of an increased demand for the commodity, or the price may fall in consequence of a decreased demand, the supply in either case remaining the same, or not increasing or diminishing in the same proportion as the increase or decrease of the demand.

(*e*) The price of a commodity may rise on account of a diminution of the supply of the commodity, or the price may fall on account of an increase of the supply, the demand in either case remaining the same, or not decreasing or increasing in the same proportion as the diminution or increase of the supply.

One word of caution before closing on this subject of prices. Many persons are disposed to attribute every fall and every rise in prices of commodities to a rise or fall in the value of money, or to a rise or

fall in the value of the commodity selected as the standard of value; but this opinion is very far from the truth, for prices are very seldom influenced, and only at long intervals by variations in the value of money, or in the standard of value; while the prices of commodities vary continuously from day to day, on account of causes relating entirely to the commodities themselves. Prices are also influenced by the state of credit, monopoly, competition, taxes, or custom duties.

The extent and quantity of liabilities are also measured and expressed in terms of money. The proportion of the burden imposed upon the citizen for the maintenance of government, taxes, etc., are all levied and assessed in terms of money. Damages for the non-performance of contracts, and for injuries to the person or to property, fines and penalties, and all dues public and private included in the term liabilities, are assessed, liquidated, and imposed in terms of money.

CHAPTER III

SOME OBSERVATIONS ON THE QUALITIES ANNEXED TO MONEY

§ 1. GOLD money, or coin, by virtue of the value of the metal contained in it, stands on its own basis; its value in exchange depends solely on the value of the metal contained in it. It requires no redemption, and no support from any outside source. It is therefore self-sustaining. For this reason it may well be called primary money, though it is sometimes called standard money, but this expression is likely to breed confusion in the mind, because standard money is coin of the standard weight and fineness as provided by law. Our silver dollars are standard money in this sense. As all other kinds of money are eventually redeemable in gold, gold money is also called redemption money.

There has always been a great deal of discussion as to whether paper money so-called is really money. Strictly speaking, it is not money. It is not an original, self-sustaining thing. It is a substitute for, and a representative of, coin, or metallic money. It says to the seller of goods or to the creditor, "Accept me in payment, and through me you can reach and obtain my principal, coin, or metallic money." It is the expectation and belief that it

will at some time or another be paid or redeemed in the primary money, which gives it its value in exchange. It is, therefore, a mere substitute for real money. However, the name of paper money has become so customary, and it is so universally considered and treated as money, and it is so generally accepted as, and performs the functions of, money, that no good can now be accomplished by refusing it the name or title of "money." But it should be distinguished from primary money in order to avoid confusion of thought. This can readily be done by calling paper money what it really is, "secondary money."

United States notes, commonly called "Greenbacks," and United States Treasury notes of 1890 are redeemable in gold. National bank notes are in the first instance redeemable in lawful money. This term "lawful money" is understood to apply to every form of money which is endowed with the legal-tender quality; since all these moneys which are endowed with the legal-tender quality are either gold money, which is not required to be redeemed, or other forms of money which are redeemable in gold, it follows that in the end national bank notes are redeemable in gold.

Paper money is of two kinds, convertible and inconvertible. A convertible note is one that is payable or redeemable in coin on demand. An inconvertible note is one that is not payable, or will not be paid or redeemed, in coin on demand, and the time of payment of which is indefinite. It is to be borne in mind that the convertibility or incon-

vertibility of paper money does not by any means depend wholly upon the terms of the note, that is, whether it is on its face made payable on demand, or whether it does not specify any time for payment; because it is the fact, whether the note will or will not be paid or redeemed in coin on demand, which determines the convertibility or the inconvertibility of the note. Thus a note, which, on its face, is inconvertible, that is, no time is specified for its payment, may actually, and in fact, be payable and redeemable on demand, in which case the note would be convertible. On the other hand, paper money notes may be made on their face convertible, that is, it may be specified that they are payable in coin on demand, and yet, if they are in fact not redeemed or paid on demand, then they become inconvertible notes.

In either case, of convertible or inconvertible notes, it is the promise to pay which gives value to the note. If the promise to pay is promptly kept and payment be made on demand, then such convertible notes make a good and satisfactory representative, or secondary money. Our paper money is now of this character. If there is a belief that inconvertible notes will at some time, although the time be indefinite, be paid or redeemed in coin, the notes will remain in use as money, but their value will depend wholly upon the degree of faith or belief in their ultimate redemption in coin. If this faith is generally strong, then the value of the notes will be greater; if the faith weakens, then the value of the money falls; and if all faith is lost, then the

paper money notes have no value at all. Hence it is that excessive issues of inconvertible notes are so dangerous and work so much mischief; because the greater the amount issued, the less the faith in the ability of the issuer to pay. So much has been said and written of late about the mischiefs of inconvertible paper, that nothing more need now be said concerning this sort of paper money.

Our silver currency, for reasons given in the first chapter, is not primary money. It is redeemable in gold the same as paper money is. Its value does not depend solely upon the value of the metal contained in the coin, and hence the silver money is not self-sustaining but rests upon gold. It is also a sort of secondary money. Gold is, therefore, the basis of all our currency.

§ 2. *The Legal-Tender Quality.*—Gold coin is a legal-tender for its nominal value, when not below the limit of tolerance in weight; when below that limit, it is a legal-tender in proportion to its weight. The standard weight of gold coins ($\frac{9}{10}$ pure gold) is as follows: the one-dollar piece, $25\frac{8}{10}$ grains; the quarter eagle, or two-and-a-half-dollar piece, $64\frac{1}{2}$ grains; three-dollar piece, $77\frac{4}{10}$ grains; the half-eagle, or five-dollar piece, 129 grains; the eagle, or ten-dollar piece, 258 grains; and of the double-eagle or twenty-dollar piece, 516 grains. The limit of tolerance in the double-eagle and the eagle is one half of a grain; in the half-eagle, the three-dollar piece, the quarter eagle and the one-dollar piece, one fourth of a grain; when any of these coins shall be reduced in weight below the limit of tolerance,

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they are only legal tender at a valuation in proportion to their actual weight.

Standard silver dollars and United States Treasury notes of 1890 are a legal tender for all debts public and private, except where otherwise stipulated in the contract. Fractional silver currency is a legal tender to the extent of ten dollars; minor coins to the extent of twenty-five cents.

United States notes are a legal tender for all debts public and private, except duties on imports, and interest on the public debt.

Silver certificates and national bank notes are not legal tender, but silver certificates are receivable for all public dues; and national bank notes are receivable for all public dues except duties on imports, and they may be paid out for all public dues, except interest on the public debt.

§ 3. *Prices and Purchasing Power.*—Price is the value of other commodities in relation to gold or silver, or, as it is sometimes expressed, price is the money value of commodities, or the value of the commodity expressed in terms of money. Gold and silver have their market price like other commodities, but the value of gold or silver or of money in relation to other commodities is called its purchasing power. All commodities, however, have their purchasing power. Gold is a universal purchasing power. Silver and other moneys have not a universal purchasing power, because these moneys do not pass current at their mint ratio outside of the country in which they are issued.

CHAPTER IV

OF THE STANDARD OF THE MEASURE OF VALUE, COMMONLY CALLED THE STANDARD OF VALUE

§ 1. THE importance of the subject of this chapter requires some extended discussion.

A clear understanding of what is meant by the expression "the standard of the measure of value," or by the expression "the standard of value" is essential, and as the word "standard" is connected with money in so many different senses, it is thought that an explanation of standards so connected with money which are not the standard of the measure of value, will materially assist in a clearer understanding of what is meant by that expression. It is not here meant by the expression "the standard of the measure of value":

(1) Primary or redemption money which many authors call "standard money." The expression "standard money," when so used, is merely to distinguish this so-called standard money from token money or paper money, etc.

(2) Nor standard money in the same sense that the coin is of the weight and fineness fixed by law.

(3) Nor the standard weight of coin.

(4) Nor the standard fineness of coin.

(5) Nor the "units" or the "unit of value"

mentioned in our coinage laws. These units are oftentimes called standard units of value, but they are merely "units" and "units of value" in the coinage, for the purpose of enumeration and the starting-point from which to count or distinguish the different coins, or the different denominations of coins in the coinage, as, for instance, the piece of gold denominated a dollar; denominating or naming this piece of gold is a certificate that there are a certain number of grains of gold of a certain fineness contained in this piece of gold. Now, this piece of gold called a dollar is the unit of coinage, and all other coins must be either a fraction or fractions, or multiples of the dollar, that is, the two-and-one-half dollar gold piece, is two and one half times heavier than the dollar, and contains two and one half times more gold than the dollar; the three-dollar gold piece is three times heavier than the dollar, and contains three times as much gold; the half-eagle, or five-dollar gold piece, is five times heavier than the dollar piece, and contains five times more gold; the eagle, or ten-dollar gold piece, is ten times heavier than the dollar, and contains ten times as much gold, and so on.

(6) Nor the sense in which the expression "standard of value" is used by some writers, namely, that it is a standard of deferred payments. It is difficult to understand how the standard of value is a standard of deferred payments. Deferred payments are debts, and the only kinds of standard I can imagine of debts is the character of the security for the debt, and the solvency of the debtor.

There might be a particular kind of security which might possibly be regarded as a standard, though it is never so termed, and the standard of solvency of the debtor is nothing more than his ability to pay. Possibly a debtor of unquestioned ability to pay might be regarded as a standard for debts, but the word standard is never so applied, and even if it were it would not be a standard of value.

Again, if by the expression "standard of deferred payments" is meant a standard for the payment of deferred debts, that never could be a standard of the measure of values, because a standard of the measure of value is the standard according to which values of commodities are measured. Money is not the standard for the payment of deferred debts, but it is that in which deferred debts are usually made payable; but that does not make money the standard of the debt any more than a contract which stipulated that the deferred debt should be payable in any other commodity would make such commodity the standard for the payment of the debt. The deferred payments under any contract, whether payable, by the terms of the contract, in money or in any other commodity, goes to and relates entirely to the consideration of the contract, and the consideration of a contract is not the standard.

§ 2. What is here meant by the expression "the standard of the measure of value," or "the standard of value," is that commodity which has been selected by the commercial world to serve that purpose, and by which all the different kinds of money in use are measured, and which is, consequently, that commo-

dity to which the prices of other commodities are ultimately referred, as, for example, gold is the standard of the measure of value, a segregation or the separation of a certain fixed and definite portion of that metal into a piece called a dollar is the instrument of measure of values, and its value is determined by the quantity of gold in the piece. Paper money and silver money are rated in gold, so that whether the dollar which is the instrument used as the measure of value, be of gold, paper, or silver, they are all rated in gold, or rather their value is rated in the value of gold, so that ultimately the prices of commodities are rated in the value of gold.

The commodity gold is, at present, that standard of the measure of value in the principal commercial nations of the world, and it was adopted as such by the common consent of the commercial world, and not by virtue of any legislative authority. Both of these propositions are established by an abundance of facts and by experience.

"In the progress of industry, commercial nations have found it convenient to coin several different metals into money; gold for larger payments, silver for purchases of moderate value, and copper, or some other coarse metal for those of still smaller consideration. They have always, however, considered one of those metals as more peculiarly the measure of value than any of the other two; and this preference seems generally to have been given to the metal which they happened first to make use of as the instrument of commerce. Having once began to use it as their standard, which they must have done when they had no other money, they have generally con-

tinued to do so even when the necessity was not the same.

"The Romans are said to have had nothing but copper money till within five years (Pliny, lib. xxxiii., cap. 3) before the first Punic war, when they first began to coin silver. Copper, therefore, appears to have continued always the measure of value in that republic. . . .

"The northern nations who established themselves upon the ruins of the Roman Empire seem to have had silver money from the first beginning of their settlements, and not to have known either gold or copper coins for several ages thereafter. There were silver coins in England in the time of the Saxons; but there was little gold coined till the time of Edward III., nor any copper till that of James I., of Great Britain. In England, therefore, and for the same reason, I believe, in all other modern nations of Europe, all accounts are kept, and the value of all goods and of all estates is generally computed in silver; and when we mean to express the amount of a person's fortune, we seldom mention the number of guineas, but the number of pounds sterling which we suppose would be given for it.

"Originally, in all countries, I believe, a legal tender of payment could be made only in the coin of that metal which was peculiarly considered as the standard or measure of value. In England gold was not considered as a legal tender for a long time after it was coined into money. The proportion between the values of gold and silver money was not fixed by any public law or proclamation; but was left to be settled by the market. . . . In this state of things the distinction between the metal which was the standard and that which was not the standard was something more than a nominal distinction.

"In process of time, and as people became gradually more familiar with the use of the different metals in coin, and consequently better acquainted with the proportion between their respective values, it has in most countries, I believe, been found convenient to ascertain this proportion, and to declare by a public law that a guinea, for example, of such a weight and fineness should exchange for one-and-twenty shillings, or be a legal tender for that amount. In this state of things, and during the continuance of any one regulated proportion of this kind, the distinction between the metal which is the standard and the metal which is not the standard, becomes little more than a nominal distinction.

"In consequence of any change, however, in this regulated proportion, this distinction becomes, or at least seems to become, something more than nominal again. If the regulated value of a guinea, for example, was either reduced to twenty, or raised to two-and-twenty shillings, all accounts being kept and almost all obligations for debt being expressed in silver money, the greater part of payments could in either case be made with the same quantity of silver money as before; but would require very different quantities of gold money; a greater in the one case and a smaller in the other. Silver would appear to be more invariable in its value than gold. Silver would appear to measure the value of gold, and gold would not appear to measure the value of silver. The value of gold would seem to depend upon the quantity of silver which it would exchange for; and the value of silver would not seem to depend upon the quantity of gold which it would exchange for. This difference, however, would be altogether owing to the custom of keeping accounts, and of expressing the amount of all great and small sums rather in silver than in gold money. One of

Mr. Drummond's notes for five-and-twenty or fifty guineas would, after an alteration of this kind, be still payable with five-and-twenty or fifty guineas in the same manner as before. It would, after such an alteration, be payable with the same quantity of gold as before, but with very different quantities of silver. In the payment of such a note gold would appear to be more invariable in its value than silver. Gold would appear to measure the value of silver, and silver would not appear to measure the value of gold. If the custom of keeping accounts, and of expressing promissory notes and other obligations for money in this manner should ever become general, gold, and not silver, would be considered as the metal which was peculiarly the standard or measure of value." [1]

In 1810 a committee of the Parliament of Great Britain, called the Bullion Committee, made a report to Parliament on the high price of bullion. In this report the committee say:

"In this country, gold is itself the measure of all exchangeable value, the scale to which all money prices are referred. It is so, not only by the usage and commercial habits of the country, but likewise by operation of law, ever since the act of the 14th of his present Majesty (finally rendered perpetual by the act of the 39th year of the reign), disallowed a legal tender in silver coin beyond the sum of 25 *l.*"

Prior to this, Lord Liverpool, in a treatise on the coins of the realm, written in 1805, maintained that gold, by the common consent of the people, had be-

[1] Smith, *Wealth of Nations*, Bk. I., chap. v. Mr. Smith wrote this work about 1776.

come a general measure of value in England, and that gold coin had been for near a century prior to the time he wrote the principal measure of value.

Ricardo, in his essay, The High Price of Bullion,[1] written in 1811, says:

"But before I proceed to examine on these principles the main object of my inquiry, it is necessary that I should show what is the standard measure of value in this country, and of which, therefore, our paper currency ought to be the representative."

"For many reasons given by Lord Liverpool, it appears, proved beyond dispute, that gold coin has been for near a century the principal measure of value; but this is, I think, to be attributed to the inaccurate determinations of the mint proportions. Gold has been valued too high; no silver, therefore, can remain in circulation which is of its standard weight."

Mr. Jevons quotes M. Cernuschi, who in his lifetime claimed to be the Father of Bimetallism, as follows:

"The bimetallism proposed by Newton was sanctioned by a law. But after some time the public officers, in spite of the law, began again to take and give in payment pieces of gold at a price superior to the legal rate; naturally the public did likewise in their transactions, and it is thus that little by little gold monometallism was implanted in England in spite of Newton. The entirely gold monometallic law, proposed by Lord Liverpool in 1816, upon the eve of the resumption of cash payments, merely sanctioned an old abuse."

[1] See his Works by McCulloch, pp. 270 and 271.

Upon which Jevons comments:

"These characteristic statements, in their original French, at least as clear as crystal, and almost sparkling as the French language alone can sparkle, are true enough as regards Locke, and Lord Liverpool, and the origin of our gold-standard system." [1]

Dr. Ad. Soetbeer, in his work entitled *Materials toward the Elucidation of the Economic Conditions*, etc. (see English translation by Prof. F. W. Taussig contained as an appendix to the Report of Mr. Edward Atkinson on Bimetallism in Europe, in U. S. Documents, No. 87, December, 1887, p. 599) says:

"In what has preceded and in what will follow we use the words 'money' and 'gold' indiscriminately. This does not really cause any uncertainty of meaning, since gold is directly or indirectly the sole measure of value in the wholesale trade of all commercial countries, even though the medium of exchange may consist of silver coins, and accounts may be kept in them."

Dr. Soetbeer then refers to a note at the bottom of the page, which note is as follows:

"This is clearly expressed in the following remarks made by an English author: 'There is no denying the fact that monetary systems may be called bimetallic, or single silver; but the income of all nations within European control or influence, all wages, all manufactures, all the world's produce come at last to be measured in value solely and inexorably against gold, and, infinitely

[1] *Investigations in Currency and Finance*, p. 332.

more than all coins, against the unit of the one-pound sterling. . . .

" ' The relative value of all of the metals tends constantly to become the same at any given time in all commercial markets, without reference to which may be the legal standard in each particular market, so that, for example, the price of silver purchased with gold can never vary more than a minute fraction in Calcutta from the simultaneous price in London.' "

It is evident from these quotations that gold is the standard of the measure of value in all the commercial countries of the world.

Our own experience confirms this. During the time of the suspension of specie payments in this country, beginning shortly after the commencement of the late civil war, and continuing until 1879, our currency—greenbacks—were always rated in gold, and never in silver, although we were then legally on a bimetallic basis. This shows that at least during and since the war gold has been our standard of the measure of value; for if the greenbacks—our currency—were rated in gold, then ultimately the prices of all commodities must have been referred to gold.

In the foregoing quotations the authors use the words " measure " and " standard" indiscriminately, but this need not create any confusion of thought, because in common discourse " measure " is often used in the sense of " standard," and " standard " in the sense of " measure "; indeed, one of the definitions of " measure " is that it is a " standard of dimensions." It is very evident, however,

that all use the words " measure " and " standard " in the same sense as we here use the expression " the standard of the measure of value," or " the standard of value." This appears from the context, as, for example, Mr. Smith not only speaks of all goods, etc., being computed in silver, which he says was then the standard, but also of the value of gold as being measured by silver, and that the value of gold would seem to depend on the quantity of silver which it would exchange for, etc., that is, that gold was rated in the standard, which was silver; and then he proceeds to say that, if gold became the standard, silver would be measured by it. So it will be seen by the context that all the other authors use the term " measure " in the same sense as the expression " the standard of the measure of value " is here used, for they speak of gold being directly or indirectly the sole measure of value, or that all things come at last to be measured in value solely against gold. This is the same as saying that gold is the standard to which the values of all commodities are ultimately referred. Some may gather the impression from what Mr. Smith says that making money a legal tender is essential to constitute any commodity the standard. Any such impression would be a mistake, and Mr. Smith did not intend to be so understood. Silver was the standard originally in England, but it was not only the silver that was coined into money, but all silver whether in a state of coin or not. Silver never was declared a legal tender, and yet it was the standard. " The conception of a law of tender is quite modern." The act of Parliament

passed in 1774, being the same act referred to in the above quotation from the report of the Bullion Committee, was "the first enactment of a law of tender in the history of English monetary legislation." [1]

The Bullion Committee in the foregoing quotation from its report, say that gold is the standard "not only by the usage and commercial habits of the country but likewise by the operation of law, ever since the act of the 14th of his present Majesty," etc., etc. This is the act already referred to as having been passed in 1774, but the committee was evidently mistaken in attributing the adoption of gold as the standard even in part to the passage of that act. That act disallowed a legal tender in silver coin beyond twenty-five pounds, but silver was still left a full legal tender by weight for any amount. Limiting the legal-tender quality of silver could not induce the people of the country to repudiate it as a standard, if they were otherwise disposed to retain it as such. Legal tender has nothing to do with the standard. Legal tender relates to money, but the standard is the metal in all forms in which it may exist. Ricardo attributes the adoption of gold as the standard measure of value to the inaccurate determination of the mint proportions. "Gold has been valued too high," etc. He is evidently mistaken in this. An over-valuation of gold at the mint could not cause or induce people to adopt gold as the standard of value. Since it was the metal gold, which was adopted as the standard, how could

[1] Shaw, *History of Currency*, p. 237. Gold was a legal tender while silver was the standard.

its over-valuation in money have influence in its adoption as the standard ?

One thing is certain, that no act of the Parliament of England, or of the Congress of the United States, ever enacted in express terms that gold should be the standard of the measure of values or the standard of value, in either of these countries. The act of the Parliament of England passed in 1816, and the act of the Congress of the United States passed in 1873, are commonly understood as having established the gold standard, that is, established gold as the standard of the measure of value, or the standard of value, in these countries respectively; but neither of these acts contain any declaration to the effect that gold shall be such standard. Though Mr. Smith is doubtless correct in statements as to silver having been the standard measure of value, and of how it came to be so adopted, and gives a very fair description of some of the causes which changed the said standard from silver to gold, yet he is undoubtedly mistaken as to the time when the said standard was so changed, for the evidence is overwhelming that even at the time he wrote, gold was such standard, and that it had become so by the common consent of the people. It is plain that gold had been the standard of the measure of value in the United States long prior to the passage of the act of Congress. It is no answer to assert that the adoption of gold as the standard of the measure of value in the United States was the result of the over-valuation of gold in the coinage; because, even if gold was over-valued, that would not make gold the

standard of the measure of value, unless the people adopted it as such by common consent. The over valuation of gold could not compel the people to adopt gold as such standard; for they might still have retained silver as such standard, and there was nothing to prevent them from so doing had they wished to do so. But they did not wish to retain silver as such standard, but did wish to adopt gold as such standard, and, therefore, they adopted gold as such standard, and such standard of the measure of value cannot be established or adopted in any other way than by the common consent of the people concerned. All these remarks apply with equal force to the adoption of gold as the standard of the measure of value in England. So it is clearly demonstrated that gold has been established as the standard of the measure of value in all the principal commercial nations of the world by the common consent of peoples concerned, and not by virtue of any positive law or legislation; and a little reflection ought to satisfy every person that such a standard could not be established by positive law or legislation, because it is a matter relating wholly to the usages and customs of trade. Even if the attempt were made to establish such a standard by legislation the law could not compel the people to use such standard against their consent; or, if there was power by law to compel the use of a particular commodity as such a standard it would not be right, nor would it be sound policy to do so; because it would be an unwarranted interference with the right of private contract, for parties dealing with each other should have the right to fix

the prices of the articles with respect to which they are dealing by any instrument of measure, and by any standard for such measure, they see fit or agree upon. The commercial world may desire to change the standard of the measure of value at any time from gold to any other commodity, or group of commodities. It is not likely that gold will forever continue to be such standard. No doubt it will go its way in course of time, just as copper and silver have gone their ways, and whenever the time comes that it will be to the convenience and advantage of trade and commerce to change the standard of the measure of value from gold to some other commodity or commodities, or to anything else, the commercial world will, without the aid of any legislation, and, even against the mandate of legislation, make the change of such standard. We see, then, how vain it is to attempt to establish the gold standard of value, or the silver standard, or the double standard of gold and silver, or any other standard by legislation.

§ 3. It is the commodity, the gold metal, and not any particular portion of it (such as that portion existing in a state of coin), which is the standard of the measure of value.

Now gold, like all other commodities, is subject to variations in its value or in its purchasing power, occasioned by the demand for, and the supply of, it. If the demand for gold increases, the supply remaining the same or not increasing to the same extent as the increased demand, then the purchasing power of gold will rise, or appreciate. If the supply

increases, the demand remaining the same or not increasing to the same extent as the increased supply, then the purchasing power of gold falls, or depreciates, and these variations in the purchasing power has, as has been already explained, its effect upon the prices of commodities; for instance, if the purchasing power of gold increases, prices of commodities will fall; if the purchasing power of gold decreases, then the prices of commodities will rise. But it is always to be remembered that a rise or a fall of prices consequent upon the variations in the purchasing power of gold is only nominal, because if, on account of a rise in the purchasing power of gold, a seller of goods receives a less price or a less amount of money for his goods than he did for the same quantity of goods before the increase in the purchasing power of gold, and although he receives a less amount of money, yet he receives just as much purchasing power as he did before the appreciation of gold; likewise the reverse of this would take place on a decrease or fall in the purchasing power of gold; then prices would rise, but the rise would only be nominal. So if the purchasing power of gold decreases, the levy and assessment of taxes and other public burdens would necessarily be correspondingly increased, so that by the increase of rates and levies at least the same amount of purchasing power would be secured; so, likewise damages for injuries to the person or to property would probably be or should be increased, in order that the person injured might receive about the same amount of purchasing power as he would have received had

there been no decrease in the purchasing power of gold, and it would be so also on liabilities the amounts of which are rated or expressed in money.

The reader may now, perhaps, be better enabled to understand why it is, that it is not that portion of gold in a state of coin which is alone the standard of the measure of value, because that portion of gold is liable to the same fluctuations in its value as gold is on account of changes in the demand or supply; so, it will be seen that it is gold, the metal gold, which is the standard, etc.

When all the money in use is at par with the standard of the measure of value, it would appear as if the standard existed only nominally; but it is really in existence and in operation at all times. If the money in use be depreciated, then the existence and operation of a standard become at once apparent, for it will then take a greater quantity of that money in actual use than one of its dollars to equal the value of the quantity of gold required to be in a dollar piece, and hence prices of commodities, etc., will rise; and it is only by comparison of the money with the standard that depreciation is made manifest. This would hold true even if gold coin were the only money in circulation, for then, if the coin were debased by clipping, sweating, friction, or by any other cause, it would depreciate, and the same effects would follow from such depreciation as from the depreciation of any other money which might happen to be in actual use. On the other hand, if the money in actual use, silver, for instance, should appreciate so that the value of the silver in a

silver dollar were greater than the value of the gold in a gold dollar, then prices would apparently fall, because the appreciated silver dollar would be contained a less number of times in any given commodity than the dollar which was of the value required by the standard of the measure of value.

Hitherto money has been stated to be the measure of value, and gold as the standard of the measure of value, but these expressions are to be understood in the sense that the value of money, the dollar, for instance, is the measure of the value or the prices of other commodities, or is that thing in which the prices of other commodities are estimated, and in terms of which money, dollars, for instance, the said prices are expressed (in the same sense as a yard-stick is the instrument which measures the length of a piece of cloth and in terms of which the length of a piece of cloth is expressed), and the expression that gold is the standard of the measure of value is used in the sense, that the value of gold is the standard of the measure of value. Hereafter in speaking of the measure, etc., or of the standard, etc., we will, for the sake of brevity, merely express the measure, etc., in the terms, " measure of value," or that " money is the measure of value," and " standard of value," or that gold is the standard of value, with this caution, however, that each of these expressions is to be understood as above explained.

Such is the actual method employed for the measurement of prices and liabilities, and it is so straightforward, simple, and natural, that one would suppose that it would be received and accepted by all as the

means and methods by which prices and liabilities are actually measured or estimated; yet this method is by no means the accepted theory. The accepted theory is that prices are governed entirely by the amount or quantity of money in circulation. It is evident that, if prices are dependent upon the quantity of money, it must be because the quantity of money controls prices, or because the use of the precious metals as money creates such a demand for these metals as will cause a rise in their market price, or an increase in their purchasing power,—on the theory that the greater the quantity of such metals used as money, the greater the increase of their value, or purchasing power—or of both of these causes.

CHAPTER V

OF THE QUANTITY THEORY

§ 1. THIS theory, as already stated, is the accepted one, and it is supported by the opinions of many of the most eminent political economists; still, I must dissent from it. It may seem presumptuous in me to attempt to elevate my opinion high enough to place it in opposition to the opinions of so many distinguished economists. I hope, however, that I shall be able to justify my boldness.

Ricardo was not the originator of this quantity theory, but he, so far as I know, has explained its operation more fully than any other author. Liberal quotations will be made from his works. As these quotations from Ricardo are all taken from his works as edited by McCulloch, it will not be necessary to do more, in defining the place from whence the quotation is taken, than to refer to the Essay and the page of the works.

"The precious metals employed for circulating the commodities of the world, previously to the establishment of banks, have been supposed by the most approved writers on political economy to have been divided into certain proportions among the different civilized nations of the earth, according to the state of their commerce and wealth, and, therefore, according to the number and

frequency of the payments which they had to perform. While so divided they preserved everywhere the same value, and as each country had an equal necessity for the quantity actually in use, there could be no temptation offered to either for their importation or exportation." [1]

"The value of the circulating medium of every country bears some proportion to the value of the commodities which it circulates. In some countries this proportion is much greater than in others, and varies on some occasions in the same country. It depends upon the rapidity of circulation, upon the degree of confidence and credit existing between traders, and, above all, on the judicious operations of banking. . . . What that proportion may be has been variously estimated." [2]

"The quantity of metal employed as money, in effecting the payments of any particular country using metallic money; or the quantity of metal for which paper money is the substitute, if paper money be partly or wholly used, must depend on three things: first, on its value; secondly, on the amount or value of the payments to be made; and, thirdly, on the degree of economy practiced in effecting those payments.

"And if a country uniformly employed the same metal as a standard, the quantity of money required would be in an inverse proportion to the value of that metal. Suppose the metal to be silver, and that, from the difficulty of working the mines, silver should be doubled in value,—half the quantity only would then be wanted for money; and if the whole business of circulation were carried on by paper, of which the standard was silver,

[1] High Price of Bullion, *Works*, p. 263; same, Reply to Mr. Bosanquet, *Works*, p. 346.

[2] High Price of Bullion, *Works*, p. 284.

—to sustain that paper at its bullion value, it must in like manner be reduced one-half. . . . When the number of transactions increase in any country from its increasing opulence and industry—bullion remaining at the same value, and the economy in the use of money also continuing unaltered—the value of money will rise on account of the increased use which will be made of it, and will continue permanently above the value of bullion, unless the quantity be increased, either by the addition of paper, or by procuring bullion to be coined into money. There will be more commodities bought and sold, but at lower prices, so that the same money will still be adequate to the increased number of transactions by passing in each transaction at a higher value. The value of money, then, does not wholly depend upon its absolute quantity, but on its quantity relatively to the payments which it has to accomplish; and the same effects would follow from either of two causes—from increasing the uses for money one tenth,—or from diminishing its quantity one tenth ; for, in either case, its value would rise one tenth,"[1] and "the value of such money must depend wholly upon its quantity."[2]

"The quantity of money that can be employed in a country must depend on its value."[3]

"No increase or decrease of its quantity, whether consisting of gold, silver, or paper money, can increase or decrease its value above or below this proportion. If the mines cease to supply the annual consumption of the precious metals money will become more valuable, and a smaller quantity will be employed as a circulating

[1] Proposals for an Economical and Secure Currency, *Works*, p. 398.

[2] Reply to Mr. Bosanquet, *Works*, p. 346.

[3] Political Economy, *Works*, p. 213 ; same, Reply to Mr. Bosanquet, etc., *Works*, p. 341.

medium. The diminution in the quantity will be proportioned to the increase of its value. In like manner, if new mines be discovered, the value of the precious metals will be reduced, and an increased quantity used in the circulation; so that in either case the relative value of money to the commodities which it circulates will continue as before." [1]

"If an addition be made to a currency consisting partly of gold and partly of paper, by an increase of paper currency, the value of the whole currency would be diminished, or, in other words, the prices of commodities would rise, estimated either in gold coin or in paper currency. The same commodity would purchase, after the increase of paper, a greater number of ounces of gold coin, because it would exchange for a greater quantity of money. But these gentlemen do not dispute the fact of the convertibility of coin into bullion, in spite of the law to prevent it. Does it not follow, therefore, that the value of gold in coin, and the value of gold in bullion, would speedily approach a perfect equality? If, then, a commodity would sell in consequence of the issue of paper for more gold coin, it would also sell for more gold bullion. It cannot, therefore, be correct to say, that the relative value of gold bullion and commodities would be the same after as before the increase of paper." [2]

"It has been observed . . . . that an increase in the paper currency will only occasion a rise in the *paper* or *currency* price of commodities, but will not cause an increase in their bullion price.

"This would be true at a time when the currency

[1] High Price of Bullion, *Works*, pp. 284–5.

[2] Reply to Mr. Bosanquet, etc , *Works*, pp. 337–8.

consisted wholly of paper not convertible into specie, but not while specie formed any part of the circulation. In the latter case the effect of an increased issue of paper would be to throw out of circulation an equal amount of specie; but this could not be done without adding to the quantity of bullion in the market, and thereby lowering its value, or, in other words, *increasing the bullion price of commodities.*" [1]

"Suppose that England's share amounted to a million of ounces; if by a law which could be effectually executed a million and a half of ounces in coin could be forced or retained in circulation by preventing its being melted or exported; or if, by means of a restriction bill, the Bank should be enabled to maintain an amount of paper which should represent a million and a half of ounces of coined gold in circulation, such million and a half would be of no more value in currency than a million of ounces; and consequently an ounce and a half of coined gold, or bank notes which represented that amount, would purchase no more of any commodity than an ounce of gold bullion. If, on the other hand, Government were to charge a seigniorage of fifty per cent., or if the issues of the Bank were to be exceedingly limited, whilst they had also the exclusive right of coining, so that the whole amount of their notes did not exceed what should represent, at the mint price, half a million of ounces of gold, that half million would in currency pass for the same value as the million of ounces in the one case and the million and a half in the other did before." [2]

[1] High Price of Bullion, *Works*, p. 270, note.

[2] Reply to Mr. Bosanquet, etc., *Works*, pp. 346–7; and to the same effect see Reply to Mr. Bosanquet, etc., *Works*, pp. 326–7; and to the same effect that the currency may as effectually be in-

"If the Bank capriciously limited the quantity of their paper, they would raise its value, and gold might appear to fall below the limits at which I propose the Bank should purchase. Gold in that case might be carried to the mint, and the money returned from thence being added to the circulation, would have the effect of lowering its value, and making it again conform to the standard." [1]

"It also follows from these principles, that in a country where gold is the measure of value, the price of gold bullion (where the law offers no restraint against exportation) can never exceed its mint price; and that it can never fall more below it than the expenses of coinage; and that these variations depend wholly on the supply of coin or paper currency being proportioned to the trade of the country; or, in other words, that nothing can raise the value of bullion even so high as the mint price but an excess of circulation." [2]

"That commodities would rise or fall in price, in proportion to the increase or diminution of money, I assume as a fact which is incontrovertible." [3]

"Suppose, again, the case reversed, and that all other currencies remained as before, while half of that of England was retrenched. If the coinage of money at the mint was on the present footing, would not the prices of commodities be so reduced here that their cheapness would invite foreign purchasers, and would not this continue until the relative proportions in the different currencies were restored?

creased by paper as by coin. Political Economy, *Works*, p. 214; and High Price of Bullion, *Works*, pp. 264–5.

[1] Proposals for an Economical and Secure Currency, *Works*, p. 406.

[2] Reply to Mr. Bosanquet, etc., *Works*, p. 347.

[3] Reply to Mr. Bosanquet, etc., *Works*, p. 326, note.

"If such would be the effects of a diminution of money below its natural level, and that such would be the consequences the most celebrated writers on political economy are agreed, how can it be justly contended that the increase or diminution of money has nothing to do either with the foreign exchanges or with the price of bullion?"[1]

"Suppose England to have one thousand ounces of gold in a state of bullion, and one thousand ounces in a state of coin, whilst her exchange with foreign countries was at par; that is to say, whilst the value of gold abroad was precisely the same as here, and therefore could be neither advantageously exported nor imported.

"Suppose, too, that the Bank were at such a time to issue notes to an amount which should represent one thousand ounces more of gold, and that they were not exchangeable for specie. If her bullion retained the same value after as before the issue of paper (which is the point contended for), how could a single guinea be exported? Who would be at the trouble and risk of sending guineas to the Continent to be sold there for their value, as bullion, while the value of bullion continued here as high as before, and consequently as high as the price abroad? Would not the coin be melted and sold as bullion at home, till the value of bullion had so much diminished in its relative value to the bullion of other countries, and therefore to the relative value of commodities here, as to pay the expenses of transportation; or, in other words, till the exchange had fallen to the price at which it would repay such expenses? At that price the whole one thousand ounces would go at once, or if any part were retained in circulation, it would

[1] Reply to Mr. Bosanquet, etc., *Works*, p. 327.

not be of less value than an equal weight of gold bullion. . . . That argument would be equally applicable if the addition to the currency had been made in gold coin, and not in paper currency.

"It appears, therefore, evident, first, that by the addition of paper to a currency consisting partly of gold and partly of paper, gold bullion would not necessarily rise in the same degree as other commodities; and secondly, that such addition will cause depression not in the nominal but in the real exchange, and therefore that gold will be exported." [1]

"Let us recur to the effect which would result from the establishment of a bank of undoubted credit in a country where the circulation was wholly metallic.

"Such a bank would discount bills or make advances to Government as our Bank does; and if the principle now contended for by Mr. Bosanquet be correct, their notes would necessarily return on them as soon as issued, because the metallic currency being before sufficient for the commerce of the country, no additional quantity could be employed. But this is contrary both to theory and experience. The issues of the bank would, as they now do, not only depreciate the currency, but the value of bullion at the same time." [2]

"Any of *these* commodities [coffee, sugar, indigo, ivory, etc.] might be exported without producing much inconvenience from their enhanced price; whereas money, which circulates all other commodities, and the increase or diminution of which, even in a moderate proportion, raises or falls prices in an extravagant degree, could not be exported without the most serious consequences." [3]

[1] Reply to Mr. Bosanquet, etc., *Works*, pp. 338–9.

[2] Reply to Mr. Bosanquet, etc., *Works*, pp. 342–3.

[3] Appendix to High Price of Bullion, *Works*, p. 293.

"If it be admitted, and how can it be denied? that the price of commodities must everywhere rise or fall in proportion to the increase or diminution of the money which circulates them;" [1]

"I hold it as a conclusion which will not admit of dispute, that if neither commodities, nor the demand for them, nor the money which circulates them, suffer either increase or diminution, prices must continue unaltered whatever quantity of gold or silver may exist in the state of bullion in such country." [2]

Mr. J. S. Mill expresses substantially the same views, and says further: "That an increase of the quantity of money raises prices, and a diminution lowers them is the most elementary proposition in the theory of currency, and without it we should have no key to any of the others." [3]

§ 2. The propositions contained in the quotations set forth in the foregoing section may be stated as follows:

(1) That the precious metals employed as money, before the establishment of banks, were divided among the different nations of the earth, in certain proportions. (But this rests only on supposition.)

(2) The value of the circulating medium of every country bears some proportion to the commodities which it circulates. (What this proportion is, is not given.)

(3) The quantity of metal, or of paper as its substitute, employed as money in effecting the pay-

[1] Reply to Bosanquet, etc., *Works*, p. 350.

[2] Appendix to Reply to Mr. Bosanquet, etc., *Works*, p. 365.

[3] *Political Economy*, Bk. III., chap. viii.

ments of any country, depends upon three things: 1st, on its value; 2d, on the amount or value of the payments to be made; and 3d, on the degree of economy practised in the use of it.

(4) The value of money does not wholly depend upon its absolute quantity, but on its quantity relatively to the payments which it has to accomplish.

(5) The value of money depends wholly upon its quantity.

(6) The quantity of money that can be employed depends upon its value.

(7) That the value of metallic money depends upon the value of the metal contained in it; if the metal itself be increased in value, the money will likewise be increased in value to the same extent; or, if the value of the metal be reduced, the value of money will be reduced to the same extent.

(8) That an increase of the currency will not only depreciate the whole currency, but the value of bullion at the same time; if the number of transactions increase in any country the value of money will rise on account of the increased use which will be made of it, and will continue permanently above the value of bullion until the quantity of money be increased; and the same effects will follow if the quantity of money be diminished; and a decrease in the number of transactions, or an increase in the quantity of money will decrease the value of money, but in these cases the relative value of bullion with other commodities will decrease, that is, will decrease with the decrease in the value of money, and that the variations in the price of gold bullion depend

wholly on the supply of coin and paper currency being proportioned to the trade of the country.

(9) That the consequences of an increase, or of a decrease, of the circulating medium by an increased issue of paper money, or by a decrease in the quantity of such paper money, are the same as if the increase, or decrease, of the circulation had been caused by an increase or diminution of metallic money.

(10) That if an addition be made to a circulation consisting partly of gold and partly of paper, by an increase of paper currency, the value of the whole currency will be diminished, and prices of commodities estimated either in gold coin or in paper currency will rise; and the same if the increase be caused by an addition of gold coin; and if the quantity of the currency be diminished, the value of the whole currency will be increased and prices will fall.

(11) That commodities will rise or fall in price in proportion to the increase or diminution of money, and that the quantity of gold or silver bullion in existence has no effect whatever on prices.

As to the first proposition, it is only necessary to say that it rests upon mere supposition. It is unnecessary to further consider it here, except to explain that the proportion of each of the nations of the earth is maintained, according to the explanation of this theory, through the intervention of the prices of commodities; that if the quantity of money in any particular country falls below this proportion, the prices of commodities in that country will fall, and commodities will be exported to other countries

in exchange for money or specie until the equilibrium is restored. This has no special bearing on the quantity theory which we are now investigating. In so far as it does, or does not, affect prices, it will be fully considered when we come to a consideration of the quantity theory generally.

The second proposition is the basis of the quantity theory, and we shall have more to say about it hereafter.

The third, fourth, fifth, sixth, eighth, ninth, tenth, and eleventh propositions relate to the quantity theory, and explain its operation and its effects. But the third and sixth propositions are irreconcilable with the fourth and fifth propositions.

The value of money depends upon its quantity; and the quantity depends upon its value. If the quantity theory were correct, then it might be proper enough to say that the value of money depended upon its quantity; but if its value does depend upon the quantity, the quantity cannot depend upon the value. Besides, since Ricardo insists that the circulation will absorb any quantity of currency, but that the increased quantity will not be of more value than the quantity was before the increase, it is, simply, impossible that the quantity depends upon the value.

The seventh proposition, to wit: "That the value of metallic money depends upon the value of the metal contained in it; if the metal be increased in value, money will likewise be increased in value; or, if the value of the metal be reduced, then the value of money will be reduced," is antagonistic to

all the remaining propositions which constitute the quantity theory, and this seventh proposition and the quantity theory are so antagonistic that both cannot be right, and it is impossible that both can exist at the same time and in the same field of operations. If the value of money depends upon the value of the metal of which it is made, and if it is subject to all the variations of the value of that metal, how can the value of money at the same time depend upon its quantity ? What has its quantity to do with its value ? And, if the value of money and the value of bullion, which is the money metal, depend upon the quantity of money, how can the value of the money at the same time depend upon the value of the metal ? It is walking in a circle all the time—the value of money depends upon the value of the metal contained in it, and the value of the money metal depends upon the quantity of the money; and these propositions are just that inconsistent and antagonistic; and a bare reading and comparison of them with each other will show them to be so. Suppose that on account of the scarcity of the metal the value of money should rise; and suppose at the same time the quantity of the currency be increased, no matter whether by coin or by paper money or by both, what will the metallic money do ? Will it rise in value in response to the increased value of the metal, or will it fall in value in response to the increased quantity of the currency ? This demonstrates how antagonistic these propositions are to each other. The seventh proposition is absolutely correct, and it is just what is ad-

vocated in this work. But we will, for the present, leave it out of consideration and pursue our investigation of the quantity theory.

§ 3. From the foregoing propositions, it appears that the quantity theory and its operations are as follows:

The value of the circulating medium of every country bears some proportion to the commodities which it circulates. Any change in the quantity of money does not change the value of the whole currency; that value remains the same as before the change; but the units or individual pieces of money which make up this quantity of money will be changed in their value by such change in the quantity of money. Now, the quantity of money is at all times made up of dollars, that is, of a certain number of dollars. If the quantity of money is increased either by the addition of paper or metallic money or by both, although the whole quantity of money will not be increased in value by reason of such increase of the currency, still the value of the individual dollars will be decreased, and there will be a corresponding rise in the prices of all commodities, except the bullion or metal out of which the metallic money is coined, which will decrease in value as compared with money. If the quantity of money be diminished either by the withdrawal of coin or paper money, then the value of the individual dollar will be increased, and all commodities, including bullion, will fall in price. If the number of transactions, or payments to be made with money, in any country, increase, then the value

of the individual dollars will increase, causing a fall in the prices of all commodities, and the value of the dollars will be above the value of the same quantity of metal in the state of bullion. And if the number of transactions or payments which money has to make in any country decreases, the value of the individual dollars will be correspondingly decreased, and the prices of all commodities, excepting bullion, will rise. Such is the explanation of the theory and its operation as enunciated by Ricardo. The explanation is lengthy, perhaps too lengthy, but the theory is of itself so cumbersome and its operation so circuitous, that I found it difficult to explain them more briefly.

Mr. J. S. Mill, while fully adopting the theory as stated by Ricardo, adds another phase to it. In the same chapter of his work already referred to, he says:

"The demand for money, again, consists of all the goods offered for sale. Every seller of goods is a buyer of money, and the goods he brings with him constitute his demand.

"As the whole goods in the market compose the whole demand for money, so the whole of the money constitutes the demand for goods."

That is to say, all the goods in the market demand all the money, and all the money demands all the goods.

§ 4. The doctrine of Mr. Mill as to demand and supply is unsound. As he states it, all the goods offered for sale is the aggregate demand for the

whole of the supply of money, and the whole supply of money is the aggregate demand for all the goods. Every person who offers goods for sale in exchange for money does not so offer his goods for money for the money's sake, but for the goods and commodities which he can procure by means of the money, so that the real and effective aggregate demand is for the aggregate of all the available supply of goods and commodities. Aggregate of demand and aggregate of supply are analogous conceptions; neither are independent facts, but are the same, only they are presented under different aspects, and both are for the same things, and the relation of aggregate or general demand and aggregate or general supply to each other is not at all affected by the employment of a circulating medium.[1]

Goods and money are insensate things, and are incapable of making demand upon each other. The demand is made and can only be made by men, and back of this demand is desire. What causes, such as necessity, fashion, fancy, taste, caprice, etc., stimulate this desire are immaterial here. The proposition of Mr. Mill, then, comes to this, that all men who have goods for sale are demanding from its holders all the money in existence; and the holders of all the money are demanding from the holders all the supply of goods. Now this is simply an impossible situation. The same persons who hold all the goods for sale, or the supply of goods, are those who also hold the supply of money offered for sale,

[1] See this subject exhaustively dealt with in *Political Economy*, by J. E. Cairnes, Part I., chap. ii.

and, under this doctrine, if all the persons who held goods were demanding all the money in supply, then every person would be demanding his own money as well as that of others. If it be said that each individual is demanding every other individual's money in exchange for the goods he offers for sale, then this is an individual demand by the holder of particular goods for the exchange of his goods for money, but this individual demand for particular commodities, however much it may affect the prices of the particular commodities, has no effect whatever on general prices.

Mr. Mill's doctrine, carried out to its conclusion, would be that, as the whole of the goods in market compose the whole demand for money, and the whole of the supply of money is the demand for all the goods, whenever the supply of money is increased there will be an increased demand for goods, which will raise their prices, and the reverse would take place if the supply of money were diminished; and again, if the whole supply of goods were increased, this would increase the demand for money, and prices would fall, and the reverse would take place if the supply of goods were diminished. But as an aggregate or general demand by all the goods upon the market upon all the supply of money, or the aggregate or general demand of all the money on all the goods in the market is an impossibility, it follows that the whole doctrine must fall, and that all results claimed to flow from it must also fall with it.

Mr. Mill has himself so qualified the doctrine

that very little, if anything, is left of it. One of his qualifications is the influence of credit on prices; another, "whatever may be the quantity of money in the country, only that part of it will affect prices which goes into the market of commodities, and is there actually exchanged against goods." But this is far from being a general demand by money upon all goods, or a general demand by all goods upon all money, for it only relates to particular sales and purchases of particular commodities which have been actually exchanged for money. Qualifying the general demand to the actual sales and purchases of commodities, is the same thing as saying that there is no such general demand. Mr. Mill finally ends the chapter by using the following language:

"The sequel of our investigation will point out many other qualifications with which the proposition must be received, that the value of the circulating medium depends on the demand and supply, and is in the inverse ratio of the quantity; qualifications which, under the complex system of credit like that existing in England, render the proposition an extremely incorrect expression of the fact."

If the proposition is an extremely incorrect expression of the fact, the proposition itself must be incorrect.

§ 5. Returning again to the theory as promulgated by Ricardo. It will, probably, simplify the question if we consider it as if there were but one kind of money in circulation—gold, for instance; and we will therefore assume for the present that

gold coin is the only money in circulation. If we find that the quantity of money does not control or influence prices where the circulating medium is wholly of gold, then, of course, the conclusion would be the same if the circulating medium were wholly of silver, or partly of gold and partly of silver.

This is self-evident, for the kind or character of the metal, or metals, used as money, whether one or more, cannot have any different effect on prices than gold alone would have, unless the money of the other metals is depreciated on account of causes relating to the metals themselves, or on account of the debasement of the coin. And if the quantity of money in circulation has no effect or influence upon prices where the circulating medium is wholly of gold, then the result would be the same where the circulating medium was wholly of convertible paper money, or partly of gold and partly of paper money. This also is self-evident; for if the quantity of gold money has no influence upon prices, paper money cannot have any, because it is the mere representative of gold money, and, as such a representative, it cannot have any greater power than gold, its principal. And so the result would for the same reasons be the same if the circulating medium were made up of gold, silver, and paper money. Assuming, then, for the present that gold coin is the only money in circulation, we proceed with the argument.

As above stated, the quantity of money is made up of dollars. Now it is conceded by all that money, that is, dollars, is the measure of value, in terms of which the prices of commodities are ex-

pressed. Under this quantity theory it would seem that the more measures of value we have outstanding or in the market, the more we will increase general prices and the more we will decrease the value of the measure, that is, the value of money and of gold.

I must request the reader to recall the caution given in the first chapter, to wit: that coined money remains after coinage the same commodity in the state of coin as it was in a state of bullion. This being so, how can the quantity of the coin, be it much or little, control the value of the whole stock of the metal? According to this theory, the greater the number of pieces of gold stamped and in circulation, the less will be the value of both the uncoined and coined gold; that is to say, the greater the number of pieces into which the supply of gold is divided, the greater will be the decrease of the value of gold; notwithstanding the fact that gold loses nothing by being divided into any number of pieces, and the very fact of its quality of divisibility without loss is the chiefest of its recommendations for use as money. Now these political economists would not make the same claim with regard to any other commodity. If, for instance, a portion of the stock of wheat were divided and put into bushel sacks, with the weight and quality of the wheat stamped on each sack, none of these gentlemen would argue that the more or the greater the quantity of wheat which was divided into sacks, the more or the greater would be the decline in the price and in the purchasing power of wheat,

and they would ridicule any such proposition, and yet this is precisely the position they take with regard to the commodity gold, under this quantity theory. Their fundamental error lies in this: that while they do not say so in express terms, still they treat the pieces of gold which have been stamped, whose weight and fineness are certified, as an entirely different commodity than the commodity of gold. This is obvious from the fact that it is claimed under this theory that the quantity of money controls the price and purchasing power of bullion or uncoined gold, and that bullion or uncoined gold has no effect whatever on the prices of commodities. If money were not treated as a different commodity from gold, it could not have these effects, or, in other words, if the coined gold were treated as the same commodity as gold in a state of bullion, it could not be said that the quantity of coined gold controlled the value of the uncoined gold, for that would be making a part of the supply of gold fix and control the price and value of the whole supply. But although Ricardo, in considering this quantity theory, treats coined gold as a different commodity than gold itself, yet he at other times treats coined and uncoined gold as the same commodity. In speaking of the injustice of the law, then in force, prohibiting the melting and exportation of coin, Reply to Bosanquet, etc., *Works*, p. 326, he says:

"If the law, however, could be effectually enforced, it would be attended with the most cruel injustice. Why should not the holder of an ounce of gold in coin have

the same advantage from the increase of the value of his property as the holder of an ounce of uncoined gold? From the mere circumstance of its having had a stamp put on it, is he to be made to suffer all the inconveniences from the *fall* in the value of his gold, in consequence of the opening of new mines or from any other circumstances, and derive none of the benefits which may result from a *rise* in its value?"

and the same sentiment is repeated in Proposals for an Economical and Secure Currency, *Works*, p. 403. This certainly shows that Ricardo considered the coined and uncoined gold as one and the same commodity, and that they are one and the same commodity has been demonstrated beyond question, and, since the quantity theory is based upon the error that coined gold is, in fact, a different commodity from gold itself, it follows that the whole theory is erroneous, or, as Mr. Mill puts it, it is an extremely incorrect expression of the fact. It is therefore safe to say that there is no such theory in use or practice.

One thing is certain, that if this quantity theory be correct, and if it be true that the more or the greater the number of pieces of gold there are in circulation, the greater is the decline or fall in the value of gold, then the other theory, that the use of the precious metals as money creates such a demand for them as will cause an increase in their prices and in their purchasing power, must be incorrect; under the latter theory, the greater the amount or the greater the number of pieces of the metal which is used as money, the greater will be the demand for the metal, and consequently the greater will be the

increase of its price and purchasing power; but, under the former theory, the greater the amount of a precious metal which is used as money, the greater will be the decline or fall in the value of both the money and the metal. It will thus be seen that the two theories are entirely contradictory and irreconcilable. Both theories cannot be correct. If the one theory is right, then the other must be wrong.

It is not at present my purpose to, nor is it necessary that I should, enter into a full and complete exposition of credit and the credit system, from the simple book credit on through bills of exchange, promissory notes, bank checks, banks, and clearing-houses. The effect of credit on prices is the same as the effect of causes relating to a particular commodity, or commodities, on the price or prices of these particular commodities, that is, the increased demand for, or the decreased supply of, the particular commodity will cause a rise or fall in its price. Credit stimulates demand for commodities to a most extraordinary degree, and the increased demand causes an increase of prices, but in either case it is the increased demand which causes the increase in price. The fact that the increase of prices of commodities on account of an increased demand stimulated by credit is so much more general and extensive than in the case of an increase in the price of a particular commodity by reason of an increased demand for it, is, I presume, the reason why the increase of prices in the one case is classed separately, and is distinguished from the other case. That

credit has a most extraordinary effect on the prices of commodities is conceded by all. At least ninety per cent. of all sales and purchases of commodities and of all payments are effected by means of credit, and without the actual handling of a single dollar of either gold, silver, or paper money.

It is the rise or the fall, or, as it is usually expressed, the expansion or contraction, of credit which causes the increased or the decreased demand for commodities, and which consequently increases or decreases the prices, so far as the prices are affected by credit. Let us take a time of depression, stagnation in business, and of low prices just after a panic or commercial crisis. For a time people heed the warning of the past, and decline to enter into any business ventures of any kind, but man's necessities and his desire to accumulate wealth impel him to do something, and to endeavor to increase the scope of his business transactions. Besides all this, all men are more or less imbued with a spirit of speculation, and with many this spirit really amounts to a propensity for gambling. Under these circumstances it is impossible that man should remain quiescent for any considerable length of time, and so, on account of the prevailing low prices at the time mentioned, first one man thinks he sees an opportunity to increase his fortune by purchasing and again selling a particular commodity, and then another man sees the same with some other commodity, and so on, until the greater part of commodities are made the objects of purchase. Now this purchasing of commodities

creates a demand, and a consequent increase of prices, and the more the prices increase the more persons are desirous of purchasing, for people are always more desirous of purchasing on a rising than on a falling market. Under these circumstances of a continual rising of prices, dealers will use all the purchasing power at their command in or for the purchase of goods, with the expectation of selling them at an advanced price, and the purchasing power which a man in this state of affairs uses is credit. Since business improves, or seems to improve, on account of rising prices, trade is said to be good (booming), and, naturally, credit expands with the increase of trade and the general expansion of business, so that any man who has been, or who is supposed to have been, successful in his speculations in commodities can command all the credit he wants, and so he goes on under this stimulus of credit to increase his purchases and thus increase the demand, and, consequently, the prices. Now all this increase of prices is wholly independent of the quantity of money in circulation. The quantity of money has no influence whatever in this rise of prices. Under these circumstances the prices would rise through the influence of credit, even though at the same time the quantity of money had actually decreased. And so, under the stimulating influence of credit, prices rise higher and higher, and this increased demand and rise in prices correspondingly increases production until the shock comes, when the bubble bursts, and all at once credit is contracted. This shock may be something most remote from the transactions or

dealings in commodities. It may be a bank failure in England or in the United States or away off in Australia. It may be a rumor of war, or what not, but whatever it is it has the effect of suddenly contracting credit, because every person is conscious of the fact that prices have been increased far above their natural level, or what they would have been under a healthy state of business. Therefore, as soon as the shock comes, credit is immediately contracted, and the result is, that although the supply of commodities has actually increased, by reason of the increased production before the shock, there is no demand at all, because all the stimulus to demand has been extinguished, and, consequently, prices fall, and generally they fall far below their natural level. The quantity of money has also nothing to do with, and has had no influence whatever upon, this fall in prices. Under the circumstances stated, the fall in prices would have occurred, even though the quantity of money were actually and largely increased. Since, however, what we may call credit prices are expressed in terms of money, it follows that, if the money in use be depreciated below the value of the commodity selected as the standard of value, the credit prices will be expressed in a correspondingly greater amount of that money, and as all the money in use is rated in the value of that commodity selected as the standard of value, it further follows that these credit prices will be expressed in a greater or less amount of money according to the variations in the value of the standard; but this in no wise affects the principles above laid down as to

the rise or fall of prices being influenced by an expansion or a contraction of credit, for, in whatever amount of money these credit prices may be expressed, the rise or the fall of prices would still be the effect of the expansion or contraction of credit, and it would not be the quantity but the quality of the money which would, apparently, cause this rise or fall in prices, so far as such fall or rise is at all influenced by money. Even if the quantity of money has any influence upon prices, such influence, as compared with that of credit, is insignificant.

Experience corroborates all that is here urged against the quantity theory, and it is only necessary to refer to one instance, which is within the recollection of every person, and which is so much in point that it cannot be regarded otherwise than as conclusive. From 1878 to 1893 the money of this country was almost doubled in amount or quantity by the coinage of silver dollars, the issue of silver certificates and Treasury notes of 1890, and yet, to the great surprise of many persons who had predicted that prices must of necessity rise in consequence of such increase of money, the prices did not rise at all, but rather fell; indeed, many prominent economists and statesmen insist that prices were continuously falling. The refusal of prices to rise in response to the increase of money should not have occasioned any surprise whatever. If those who predicted a rise of prices in consequence of such increase of money had only suspended their opinion until they had reflected, ever so little, over the situation, they would have known that, inasmuch as gold was the

standard of value, and that all the increased money was maintained at par with gold, there could be no consequent increase in prices. Against such a conclusive fact, all theory and argument to the contrary must be powerless, and this one actual fact will ever stand as a complete and entire refutation of the whole quantity theory.

Although it is not so stated in express terms, yet the effect of this quantity theory is to constitute the unknown proportion between the value of the quantity of money and the commodities which it has to circulate, or the payments which it has to make, as the standard of value; for this proportion controls the value of the money which is the measure of value; and it is impossible to imagine a more indefinite, intangible, uncertain, and unstable standard. The proportion is unknown, and it varies (1) upon an increase of the quantity of money, (2) upon a decrease of the quantity of goods it has to circulate, (3) upon a decrease of the quantity of money, (4) upon an increase of the quantity of commodities it has to circulate, (5) on the value of the money which depends upon its quantity, (6) on the quantity of the money which depends upon its value, (7) on the rapidity of the circulation of the money, (8) on the degree of economy practised in the use of it, and (9), above all, upon judicious banking.

It has already been shown that the commodity gold is the standard of value. If it is so, then a proportion between the value of the quantity of money and the quantity of goods it has to circulate cannot be the standard, for there cannot be two

standards of value, hence one or the other is not the standard. That the proportion between the value of the quantity of money and the value of the quantity of goods the money has to circulate, or the quantity of money is not the standard of value, Ricardo himself proves, and therefore it is unnecessary for me to enter into any extended argument in order to show that it is not. Ricardo, when he wished to show the depreciation of bank notes in England during the restriction, did not attempt to prove such depreciation by any proportion which the quantity of money bore to the commodities it had to circulate, or by the quantity of money. He did nothing of the kind, but he compared the value of that paper money with the standard measure of value, gold. In his Political Economy, *Works*, p. 57, he says:

"The extensive use of paper money does not alter this question, for paper money conforms, or ought to conform, to the value of gold, and therefore its value is influenced by such causes only as influence the value of that metal."

In his Reply to Mr. Bosanquet, etc., *Works*, p. 332, he says:

"The value of a bank note is ascertained, not by the number of transactions which may take place in the purchase or sale of gold, but by the actual comparative value of the note with the value of the coin for which it professes to be a substitute.

"How would Mr. Bosanquet calculate the depreciа-

tion of such forced notes but by a comparison of their value with the value of bullion?"

Reference is also made to the quotations in the last preceding chapter. In the following quotations, which are all taken from his essay on Proposals for an Economical and Secure Currency, although he seems to treat both gold and silver as the standard of value, yet it is perfectly manifest that he does not consider a proportion between the quantity of money and the quantity of commodities, or the quantity of money as the standard of value. It is submitted that his remarks quoted utterly exclude any such theory. In *Works*, p. 397, he says:

"No plan can possibly be devised which will maintain money at an absolutely uniform value, because it will always be subject to those variations to which the commodity itself is subject, which has been fixed upon as the standard.

"While the precious metals continue to be the standard of our currency, money must necessarily undergo the same variations in value as those metals."

On page 402, he further says:

"While a standard is used, we are subject to only such a variation in the value of money as the *standard* itself is subject to; but against such variation there is no possible remedy, and late events have proved that, during periods of war, when gold and silver are used for the payment of large armies distant from home, those variations are much more considerable than has been generally allowed. This admission only proves that gold and

silver are not so good a standard as they have been hitherto supposed. . . . They are, however, the best with which we are acquainted. . . . While these metals are the standard the currency should conform in value to them, and whenever it does not, and the market price of bullion is above the mint price, the currency is depreciated. This proposition is unanswered, and is unanswerable."

And still further, on page 404, he says:

"To secure the public against any other variations in the value of the currency than those to which the standard itself is subject, and at the same time to carry on the circulation with a medium the least expensive is to attain the most perfect state to which a currency can be brought."

Gold being the standard of value, it follows that the quantity of money is not the standard, and, consequently, that the quantity of money has, and can have, no influence on prices, unless the money be depreciated.

The quantity of money is not

CHAPTER VI

DOES THE USE OF A PRECIOUS METAL AS MONEY CREATE SUCH A DEMAND FOR THAT METAL AS WILL CAUSE A RISE IN ITS MARKET PRICE, AND AN INCREASE IN ITS PURCHASING POWER?

§ 1. HERE again I find myself in opposition to the generally accepted theory, for, undoubtedly, the generally accepted theory is, that the use of a precious metal as money creates such a demand for the metal as will cause an increase in both its market price and in its purchasing power; or, as it is usually expressed, that the monetary demand for the metal increases its value; but I must demur to it. I do so with regret, but it cannot be helped, as I must go wherever my reasoning takes me. The results of the accepted theory are that the use of a metal as money increases its value, and that, consequently, the suspension of its use as money causes a decline in its value. The application at present made of this accepted theory is that Germany, by reason of having, in 1873, made gold its primary money, and silver only a subsidiary money, or, as it is generally called, demonetized silver, which, being followed by the suspension of the private coinage of silver in the nations composing the Latin Union, —France, Belgium, Italy, Switzerland, and Greece,

—caused the great decline or fall in the price of silver since 1873. There is something a little peculiar about this accepted theory. Of all the writers I have consulted, but a very few mention the fact that the use of a metal as money creates such a demand as will increase its price and purchasing power, but those who do mention it do not offer a single reason or fact to support it. The remaining authors simply, tacitly, accept the theory without even so much as taking the trouble to state that there is such a theory. So far as my investigations have extended, the theory seems to rest on bare assumption.

§ 2. For the purpose of this investigation we will at present consider that gold is the metal. This will simplify matters, and will exemplify the argument as well as if we considered both gold and silver, for the same reasoning which applies to gold applies to silver.

It is generally conceded that stamping a certificate of its weight and fineness upon a piece of gold does not increase its value. If coinage could increase the value of the metal, then the government could, by stamping a piece of copper of the same weight as the weight of the gold in a gold dollar, and calling this piece of copper a dollar, make this piece of copper of the same value as a gold dollar.

Our government, in its statements of the amount of gold in the Treasury, reports coin and bullion indiscriminately, and, if the holder of coin wished to convert it into bullion, he would only receive the same weight of gold in bullion as the weight of the gold in the coin,—no more, no less.

If coin is exported, it is only at the bullion price; coinage adds nothing whatever to its value.

If one kind of money be withdrawn from circulation on account of the depreciation of another kind of money in concurrent use with it, as, for instance, if both gold and silver dollars were equally a legal tender, at a certain ratio, and the silver dollar were to become depreciated fifty per cent. below the value of the gold dollar, gold coin would immediately be withdrawn from the circulation, and would either be hoarded or sold the same as uncoined gold, or, as it is generally expressed, the coined gold would become merchandise; but the term "merchandise" is unfortunate in this connection, because it conveys the idea that the coin while in circulation was something else than merchandise, whereas, in truth, gold is merchandise, a commodity, whether it be in a state of coin or in a state of bullion. What really takes place in case of such a depreciation of one kind of money—silver, for instance,—is this: the holder of gold coin as soon as he hears of the depreciation of the silver money, knows that the prices of all commodities will at once be increased to at least as much, if not more, than the depreciation of the silver, because dealers know they must accept payment in the depreciated silver dollars,—they being a legal tender,—likewise, all debts will be paid in the depreciated silver money, therefore the holder of the gold coin simply refuses to sell, exchange, or part with it, either in the purchase of goods, or in the payment of a debt, at its mint-rating with silver; that is, he refuses to let the gold in his gold

dollar go at the same value and consideration as that of the value of the silver in a silver dollar; he refuses to part with his gold dollar for the same quantity of goods a silver dollar will purchase, or for the discharge of no more of a debt than a silver dollar will discharge (in short, gold refuses to allow itself to be treated on an equality with silver); and why should he not refuse to do so, when he can readily sell or dispose of one gold dollar for two silver dollars, and with each silver dollar pay as much of a debt as he can with a gold dollar? The holder of gold coin will then only sell it at the market price and not at its mint-rating in silver, or dollar for dollar with silver. It may be said that it is not the fact of its being coined which increases the value of the coin, but the fact of its being in circulation. But what is meant by "being in circulation?" Nothing more than that it is being continuously offered for sale, or in exchange for other commodities, and so it is continued for sale, although withdrawn from the circulation, under the circumstances above stated, and is just as much for sale or exchange in the one case as in the other; but if the gold coin be so withdrawn from circulation, the fact of its being coined does not add anything whatever to its value. It merely retains the same value which it had while in circulation; that is, the same value of an equal quantity of gold in a state of bullion.

Endowing gold coin with a legal-tender quality does not add to its value. If it is sold or exchanged for bullion, it purchases or exchanges for no more bullion than weight for weight. Coined gold will

not purchase or exchange for any more of other commodities than gold bullion will, nor does the coin which is a legal tender sell for any more than bullion; nor is its market price any greater than the price of bullion.

§ 3. I must again beg the reader to bear in mind that coined gold remains, after coinage, the same commodity as it was in a state of bullion. Whether gold is coined or uncoined it is always the same metal. Since, then, the value, quality, and character of the coined gold remains the same in all respects as that of the uncoined metal, it is hard to conceive of any reason why the use of a portion of the gold metal as coin or money should increase the value of the whole.

Consumption is the end of production; without consumption there would be no demand, and, consequently, no production; a demand which will effectually diminish the supply of a commodity must be a demand which is made for the purpose of consumption. Until a commodity reaches the hands of a purchaser who purchases it for his own use and for his own consumption, the supply of that commodity is not diminished, no matter through how many dealers it may have previously passed for sale. As long as a commodity is in supply for sale, the supply is not diminished. It follows, therefore, that, in the end, it is only a demand for consumption, without a corresponding increase of supply, or an increase of supply without a corresponding increase of the demand for consumption, which will cause an increase or a decrease in the price or value

of a commodity. The demand for consumption of gold is the demand for consumption in the arts—plate, ornaments, and the like,—hoarding, exporting it to the oriental countries, or any other demand which will take it out of commerce and out of the supply for sale. The use of gold as money is not such a demand for consumption. It is not there consumed, unless it be what is consumed or lost by friction, and this is so inconsiderable as to be unworthy of notice; and this loss is daily becoming less, on account of the coin being actually handled less and less; besides, it is an open question whether just as much is not lost while the gold is in a state of bullion as while it is in a state of coin. While coined money remains in circulation it is always and continuously offered for sale or exchange for other commodities, or for the melting-pot, or for consumption in the arts, or for hoarding, exporting, or any other demand which will take it out of commerce and out of the supply for sale, and it is just as much for sale for actual consumption, hoarding or exporting, etc., as that portion of the gold which is in a state of bullion. In all these respects there is no difference whatever between the uncoined gold and the coined gold in circulation. Being divided into many small portions neither increases nor diminishes the value of gold, and its passing through many hands does not increase or diminish its value, or prevent it from still being for sale or exchange. Every man is thus a dealer in coin or money. Wherefore, it is manifest that coined gold in circulation is just as much a part of the supply of gold for

sale as that portion which is in a state of bullion. Both the coined gold and the bullion constitute the supply of gold for sale or exchange, and, hence, the use of gold as money cannot increase either its price or its purchasing power.

§ 4. It may possibly be, and, for the present, for the sake of the argument, we will concede that where two metals, such as gold and silver, are used concurrently as money, both having the right of free and unlimited coinage at a fixed ratio, and both being a legal tender, the supply of both metals may, for monetary purposes, be regarded as one composite mass; the value of this compound mass being the aggregate of the values of the supplies of both metals, and the value of the money metal supply being so much increased in value, any change in the demand or supply of either metal, and a consequent increase or decrease in the value of one of the metals would affect the value of the composite mass of both metals, proportionately less than the value of the one metal alone. For instance, say that the addition of the supply of silver would double the value of the mass of both metals, then an increase or a decrease in the value of one metal would only affect the value of the mass proportionately half as much as it affected the one metal; but while the proportion of the variations might not be so great, they would occur oftener, because whenever either of the metals varied in value, the value of money would vary. But the extent of the variations in the value of the composite mass of both metals would be less, not because both metals were used as money, but the

extent of the variations in the value of money would be less, because the extent of the variations in the value of the composite mass of both metals was less.

If both metals were regarded as being in one composite mass for any other purpose, and if they were, in fact, mixed up in one compound, the variations in the value of the mass would not be proportionately so great as in the value of one metal alone, though the fall in value was only in the one metal, even though either one or both of the metals were not used as money. The use of the metals as money has, therefore, nothing to do with the value of the composite mass of both metals. In any event the use of both metals as money and the regarding both metals as being in one compound mass, do not either increase or decrease the value of either metal. All that the treating of both metals as one composite mass can possibly do is to proportionately decrease the extent of variations in the value of the composite mass, but it can have no effect whatever on the actual variation in the value of either metal.

Silver and gold are not homogeneous. They are entirely different commodities; each has in a great degree its separate source of supply; each has its separate demand for consumption; each has its separate price and its separate purchasing power; and the value of each is affected by the increase or the diminution of the demand for it, or the supply of it, without regard to any increase or diminution of the value of the other. From the time of their production until their final consumption, and in their uses as money, each flows in a

separate and distinct stream from the other; they are never united or amalgamated, nor are they ever compounded in a composite mass. It is therefore highly improper, under any circumstances, to regard them as being in a composite mass, for they are not so, and never were. If the supply of both metals were actually melted together and formed into one composite mass, or, if even when coined the dollar should consist of a compound of certain proportions of gold and silver, there might be some reason for regarding both metals as being in one composite mass; but separate and distinct as both metals are, and separate and distinct as they are maintained in their use as money, it can never be proper to regard both metals as being in one composite mass. Each metal being a different commodity, each having its own separate supply and demand, independent of the other, each having its separate price and purchasing power, and each being kept separate and distinct from the other in all its uses, it follows that the value of that portion of each metal which is used as money is regulated entirely by the value of metal out of which the money is made, and that the use of both as money does not make the value of both or of either subject to less variations in value, or render them more stable in value. Wood and iron are both extensively used in the construction and manufacture of many of the same things, and yet no one would assert that, for that reason, the price of wood controlled the price of iron, or that the price of iron controlled that of wood, nor would anyone contend that this joint use

of both commodities would throw both into one composite mass, or make both more steady in price; and let it not be forgotten that this illustration is a much stronger case for the application of the alleged rule of the control of prices than the claim of the use of two metals as money controlling the price and value of each is; for in the case put as an illustration the wood and iron are actually consumed and are used for that purpose, while in the latter case there is no consumption of the metals and they are not used for the purposes of consumption, but for the purposes of sale and exchange, just as they were used in a state of bullion. It must, therefore, be admitted that the use of the two metals, as money on a perfect equality, does not either increase or decrease the value of either metal, and hence the conclusion already reached, that the use of a precious metal as money does not increase either the price or the purchasing power of such metal, is correct.

§ 5. The conclusion herein arrived at is strongly supported by history and experience.

During the period 1789–1796 the French Government issued large quantities of paper money based on the public lands; this paper money was at first called assignats, and afterwards mandats were issued for the assignats. Notwithstanding the most stringent laws, this paper money depreciated to a most fearful extent. All the specie was driven out of circulation. It was hoarded, and its use as money prohibited. But neither gold nor silver depreciated in value although their use as money was entirely suspended. On the contrary, silver, which was the

principal money which had been used as a circulating medium, commanded a premium, although its purchase was punished by a penalty of six years in irons. The whole system was demolished in 1796, and a new decree authorized every man to transact business in the money and on the terms he chose. Mandats were only to be taken at their market value. Immediately specie appeared in circulation; immense hoards came forth from their hiding-places, and goods and commodities being very cheap, caused immense sums to be imported from foreign countries.[1]

In 1797, the Parliament of England passed what is known as the restriction act, prohibiting the Bank of England from paying out specie. Specie payments were thereupon suspended in England from that time until 1821, and specie disappeared entirely from the circulation. There was much dispute at the time, and the dispute is not yet settled, as to whether gold appreciated in value during this suspension, or whether the paper currency had depreciated. Writers and statesmen were divided into two classes on this question and waged fierce warfare against each other, but all agreed that gold and silver, notwithstanding the suspension of their use as money had not depreciated in value. In 1819 an act of Parliament was passed directing the resumption of specie payments; the Bank actually resumed specie payments in 1821. The resumption act had been preceded by a very severe commercial crisis in 1818, many failures having occurred. It is

[1] See *Money*, by F. A. Walker, pp. 336–347.

claimed by some that the large amount of gold required for the purpose of resumption, or rather the increased demand for gold for this purpose, caused an appreciation of gold and a consequent general fall in prices. This has, however, been as strenuously denied as it has been asserted. The only authority that there was a decline of prices subsequent to resumption is Jevons; but, according to Jevons, prices had reached their highest point in 1809, and the decline was continuous, with variations, from that time. Besides, Jevons only gives averages, which do not prove a general fall of prices. The commercial crisis occurred in 1818, and no doubt the subsequent fall in prices was largely due to it. Even if there was a fall in prices after resumption it would by no means follow as a matter of course that such fall was the result of resumption, or the so-called unusual demand for gold for the purpose of resumption. England had during the war with France advanced with wonderful strides in trade, inventions, and manufactures. There was also an extraordinary tide of speculation. The demands of the war stimulated the production of all supplies and war materials to an unprecedented extent, and, when the war closed in 1815, there was no longer any demand for these supplies and materials, and the result was the usual reaction and the stagnation in business until the capital in the production of these supplies and materials became diverted into other channels. These facts in connection with the over-trading are sufficient to account for any possible fall in prices. There was no rise in the

silver price of gold after resumption, and the silver price of gold really fell after that event. Chevalier says: that (judging from the price of gold in Paris) the absorption of gold in Great Britain did not appear to make any appreciable change in its price. S. Dana Horton, who endeavored to show that the demand of England for gold was for the purpose of resumption,[1] seems to have been unable to satisfactorily account even to himself for the (as he says) slight rise in the silver price of gold (there was no such rise at all), and he finally concludes in these words:

"He who would judge, therefore, of the comparative permanence of value of the two metals, must inquire whether the average of silver prices on the Continent fell in the year of resumption as the average of gold prices fell in England. It will not be until this question is answered in the affirmative, that the proof of the steadiness of gold based upon the effects of resumption in gold will be discovered. Until then it remains an invention."—

Which is equivalent to admitting that until we know whether silver prices rose or fell on the Continent, we will not know whether the fall in prices in England was caused by the appreciation of gold or not. So it is simply not proven by any fact that gold did appreciate after resumption. The weight of authority is decidedly against any such conclusion. Mr. Tooke, the highest authority on prices, says, that the then prices were in consequence of scarcity and speculation.[2] There is one fact, how-

[1] See *Silver and Gold*, chap. vii., p. 74 *et seq.*

[2] See quotation cited by F. A. Walker in his work entitled *Money*, p. 362, note 1.

ever, which ought to be conclusive upon the question, that, even if prices did fall after resumption, such fall was not on account of the appreciation of gold, and this fact is the admitted one, that gold did not depreciate by reason of the suspension of its use as money during the restriction. If the claim that the increased demand for gold for resumption appreciated the value of gold be correct in principle, then the decreased demand on account of the suspension should have depreciated the value of gold. If the principle be sound, it must work both ways. If it be said that the increased demand for use as money will appreciate the metal, but that the decreased demand for the same use will not depreciate the metal, what becomes of the theory that the demonetization of silver by Germany, and the restriction of its coinage by the Latin Union, caused the present depreciation of silver? In fact, there was no general fall in prices following resumption. There is but one conclusion which can be reached with regard to the effect of resumption in England, and that is that the resumption and the additional demand for gold for the purposes of resumption did not appreciate the value of gold.

From about 1820 to 1850 gold was driven out of the circulation in France on account of it being rated too low at the mint, the mint-rating being less than the market price. It is strenuously denied that all the gold was driven out of circulation in France during this period, but the only fact brought forward in support of the denial is that the French mint continued to coin gold during this period; and

so it did, but in such greatly diminished quantities that it is highly suggestive that there was very little, if any gold, left in the circulation. But the fact, even if true, is not pertinent to the issue; for the reason that it does not at all follow that there was gold in circulation because gold was coined at the mint. Every man of middle age who was living in this country during the late civil war knows that there was not a dollar of gold in circulation—used as money—during the whole period of the suspension of specie payments, from 1861–1879, while an inspection of the mint reports show that there was far more gold coined in this country during the suspension of specie payments, 1861–1879, than the mint reports of France show to have been coined during the period 1820–1850. The natural result would be that if gold was underrated it would disappear from circulation, and the evidence of travellers in France, and of French writers, is that there was, during the period mentioned, no gold in use as money in that country. Even those who deny that gold disappeared entirely from the circulation admit that the quantity remaining in circulation was very greatly diminished, which is sufficient for our present purposes, for it greatly diminished the monetary demand for gold. Gold, notwithstanding this decreased demand for it for monetary uses and the suspension of its use during this period in France, did not depreciate in value. Its silver price did not decrease, but rather increased. Gold was at a premium during this period in France; and silver, notwithstanding the increased demand for it for

monetary uses, did not rise in value; on the contrary, it rather diminished in value. Neither was there any decrease in the purchasing power of gold during this period.

In consequence of the immense increase in the production of gold, following its discovery in California and Australia during the period of 1851–1866, silver was driven out of circulation in France, or at least the proportion of silver in circulation was very greatly reduced, and gold took its place. The fact that silver was wholly driven out of the circulation is denied, and the denial is supported by the fact that silver was coined in France during this period, just as this fact was presented in denial of the claim that gold had been entirely driven out of the circulation during the period 1820–1850. The same reasons urged against the pertinency of this fact in 1820–1850 apply with equal force to the subsequent period, 1851–1866, and it is unnecessary to repeat them here. It is not denied that the quantity of silver in circulation was greatly reduced. Silver did not fall in its price nor in its purchasing power on account of the suspension of its use as money in France during this period, and this is the important point. It increased in its market price and was at a premium in France. It may be that the silver prices rose somewhat, but, if they did, the increase of silver prices was much less than the increase of gold prices, and the increase of silver prices is easily accounted for ; although the increase in the production of gold far exceeded the increase in the production of silver, still the increase in the production

of silver during this period was almost double what it had been during any former corresponding period of time, and if there was any increase in silver prices it was caused by the increase of the supply of silver, and not by the suspension of its use as money. Certain it is that gold did not, during this period (1851–1866), increase either in its market price or in its purchasing power, so it cannot be contended that the increased use or demand of gold for monetary purposes increased its price or purchasing power. It is quite natural to suppose that the tremendous increase in the production of gold during this period would raise the gold price of commodities, and it is insisted by some authorities that there was in fact such a rise in gold prices in consequence of this great increase in the supply of gold, but this fact is strenuously denied by equally as prominent and reliable authorities. Waiving this question, it is sufficient, for present purposes, to know that silver did not decline in price or in purchasing power because of the suspension of its use as money, and that gold did not rise in price or in purchasing power on account of its increased use and demand for monetary purposes.

It has already been mentioned that specie payments were suspended in this country during the period 1861–1865. In 1861 there were over $200,000,000 of gold in circulation in this country; the suspension took place in December, 1861, and thereupon every dollar of gold disappeared from circulation as if by magic. This fact is within the recollection of so many persons that it is sufficient

to barely mention it, and it cannot be successfully contradicted. This vast amount of gold was, then, according to the accepted theory, thrown on the markets of other countries, increasing their stock of money, and, consequently, causing a depreciation of gold, and a corresponding appreciation of prices of commodities; but, unfortunately for this theory, there was no depreciation of gold either in price or in purchasing power.

When our government in 1879 collected gold for the purpose of resuming specie payments it received $95,500,000 by the sale of bonds, and this sum, with the surplus coin in the Treasury, made a fund of $133,508,804.50 for resumption; and this sum accomplished resumption of specie payments, although it had been confidently predicted that it would require, and was afterwards just as confidently asserted that it did require, over $1,000,000,000 to resume, and this in the teeth of the actual fact to the contrary. The accumulation of coin for the purposes of resumption and its actual use for that purpose in 1879 did not appreciate the price or the purchasing power of gold.

While tobacco was used as money in Virginia it did not increase its price or purchasing power. Though it was by law made a legal tender, and the only legal tender; though its price was fixed by law, its production curtailed, and everything else was done so far as law could do anything to maintain its price, still tobacco fell from three shillings and sixpence per pound to one pence per pound. Thus history and experience abundantly prove that the

use of a precious metal or any other commodity as money does not increase its price or its purchasing power.

§ 6. It is asserted, with all possible vehemence, by a class of economists and statesmen, that the demonetization of silver by Germany, in 1873, and the subsequent partial suspension of the coinage of silver in the nations composing the Latin Union caused the great fall in the value of silver, which began in 1873 and has continued ever since. If, indeed, it be true that this fall in silver began in 1873, then this fact, and the demonetization of silver by Germany, and the suspension of coinage of silver on private account by the Latin Union, must, in the light of history, experience, and reason, be regarded as a coincidence, and not as cause and effect. It is now proposed to consider whether the acts of Germany and the Latin Union were the cause of the decline in the price of silver. Taking a calm and unimpassioned view of the whole question, it seems impossible that these acts could have had any such effect. Certainly they could not have any such effect if the conclusion already reached in this chapter be correct. Independent, however, of the conclusion already reached in this chapter, I think it can be demonstrated that the action of Germany and of the States of the Latin Union did not cause the decline in the price of silver. Germany retained a very great proportion of its silver in circulation which it recoined into imperial silver coins. Up to 1893 it had not sold more than about $140,000,000 worth of silver. This was less than any one year's pro-

duction since 1888; and this comparatively small sum of silver thrown on the market could not have caused so great a decline in the price of that metal. The States composing the Latin Union did not withdraw any of their silver from circulation, but merely suspended the coinage of silver on individual or private account. It is manifest, therefore, that there was not sufficient of the metal withdrawn from circulation to cause any decrease in its value. Besides, there was, in fact, no decrease in the quantity of silver money in use, because a great deal more silver has been coined since 1873 than for any previous period of time of equal length, and since there is as much, or more, silver money in use subsequent to 1873 as there was prior to that time, it follows that the decline in the price of silver was not caused by the withdrawal of silver money from circulation, for there was no reduction in the actual quantity of silver money in use. The whole amount of silver withdrawn from circulation by all States, leaving out of consideration the quantity added since 1873, did not amount to as much as the gold which was thrown out of circulation in this country by the suspension of specie payments in 1861; and we have seen that the withdrawal of this amount of gold did not decrease the value of gold. But it is asserted that the action of Germany and the action of the Latin Union were a threat that there would be no future demand for silver. This threat of a loss of future demand could only affect future supply. If the future supply exceed the future demand, it would be merely a question of over-production;

and even if these States had no future demand for silver for monetary purposes, that would not be the cause of the decline in the price of a future supply, but the future over-production would be the cause. But there has been in fact no decrease in the monetary demand since 1873, but rather an increase. The threat of a loss of a future demand did not therefore cause the decline of the price of silver. If it be said that although there had been no actual decrease in the monetary demand for silver, still the suspension of private coinage, or the denial of free and unlimited coinage by Germany and the Latin Union was the cause of the decline of the price of silver. If this denial or suspension had any such effect, it must be so, for the reason that the right of coinage of the whole supply of silver, or that the mint, creates such a demand for the metal as will cause an increase in its market price and in its purchasing power. But we have seen that coinage itself adds nothing to the value of the metal; much less then can the mere right of coinage add to the value of the metal; and, as to the mint creating a demand for silver, any such claim is simply preposterous. The mint can create no demand. It merely certifies to the weight and fineness of the metal contained in the coin. As well say that the inspector of oil or any other commodity creates a demand for the oil or other commodity inspected. If the Government erected flouring mills all over the country and would grind every man's wheat free of charge, this would be free and unlimited grinding, and yet no one would claim that these mills created a demand for

wheat. Now, the denial or suspension of free and unlimited coinage of silver can only affect the value of silver for one or the other of the reasons above given, to wit: that the right of coinage of the whole supply of silver, or that the mint, creates such a demand for the metal as will cause an increase in its value, and in no other possible way can such suspension or denial of free and unlimited coinage have any such effect. Since neither of these reasons or causes can have any such effect we must conclude that the action of Germany and of the Latin Union is not responsible for the decline of the price of silver. Some persons charge that the act of Congress of this country, passed in 1873, constituting gold the primary or redemption money and silver subsidiary or secondary money,—the crime of 1873—was the cause of the fall in the price of silver, but, surely, this claim cannot be made seriously. This country had then no silver in circulation, and, consequently, threw no silver out of circulation, and hence the act of Congress could have no effect on the price of silver.

Some there are who have assumed that it was not silver which depreciated in its purchasing power, but that gold, on account of the increased demand for it to take the place of the silver money which had been displaced by the action of Germany and the States of the Latin Union, has appreciated in value. As to silver not having depreciated, it is admitted that its purchasing power has decreased at least since 1891: and this admission was compulsory, for the reason that their own favorite statistics proved be-

yond question that in 1892 and the subsequent years, silver had depreciated in purchasing power; of course these statistics only proved what had always been the fact, but the evidence of it had not until that time been reduced to a demonstration. As to the appreciation of gold, it is sufficient to say that, inasmuch as it has been shown that but a small quantity of silver was ever displaced, and that that small quantity has been more than replaced by subsequent coinage, there could not have been such an increased demand for gold to replace in the currency the silver which had been displaced, as would have caused its appreciation. The States of the Latin Union did not have to purchase gold to replace the silver which had been displaced, for these States did not displace any silver; and as to the purchase of gold by Germany, it appears that from 1871 to 1886, the excess of the imports of gold into Germany over the exports was but a little over $113,000,000, a sum much less than was withdrawn from circulation in the United States in 1861 (which made no impression on prices), and a sum much too small to cause any appreciation of gold. During the same period the excess of the exports of silver from Germany over the imports was a trifle over $3,240,000, a sum entirely too small to have caused any fall in the price of silver.

It is not at all difficult to locate the cause of the decline in the value and price of silver, and the true cause has been presented over and over again, but those who insist that the decline in the value of silver was caused by the action of Germany and the

Latin Union refuse to recognize the truth. The true cause of the fall in the price and value of silver is no mystery. It was, and is, simply the unprecedented increase in the production of silver. The figures show that in modern times the highest price of silver was in 1859: its average price for that year being $62\frac{1}{16}$ pence per ounce; from this time on the price of silver declined, gradually and with some fluctuations, but with ever-increasing force. Thus the average price per ounce during the year 1864 was $61\frac{3}{8}$ pence; in 1869, $60\frac{7}{16}$ pence; in 1874, $58\frac{5}{16}$ pence; in 1879, $51\frac{1}{4}$ pence; in 1884, $50\frac{3}{4}$ pence; in 1889, $41\frac{11}{16}$ pence; in 1894, $28\frac{7}{8}$ pence; in 1897, $27\frac{3}{4}$ pence.

The world's production of silver was as follows:

Period.	*Ounces.*	*Coinage Value.*
1841–1850 (10 years) . .	250,903,422	$ 324,400,000
1851–1855 (5 years) . .	142,442,986	184,169,000
1856–1860 " " . .	145,477,142	188,092,000
1861–1865 " " . .	177,009,862	228,861,000
1866–1870 " " . .	215,257,914	278,313,000
1871–1875 " " . .	316,585,069	409,322,000
1876–1880 " " . .	393,878,009	509,256,000
1881–1885 " " . .	460,019,722	594,773,000
1886–1890 " " . .	544,557,145	704,073,900
1891–1895 " " . .	787,694,425	1,018,433,200

The following table of the average prices during the same period shows how naturally and uniformly the prices of silver fell correspondingly with the increase of its production.

1841–1850	59.68 + pence.
1851–1855	61.16 + "

1856–1860	61.50	pence.
1861–1865	61.21 +	"
1866–1870	60.82 +	"
1870–1875	59.05	"
1876–1880	52.725	"
1881–1885	50.737+	"
1886–1890	44.47 +	"
1891–1895	35.825	"

The annual production increased from $81,864,000 in 1873 to $216,292,500 in 1895, about two and one-half times greater than the production of 1873. The average price of silver in 1873 was $59\frac{4}{16}$ pence; in 1895 it was $29\frac{14}{16}$ pence, a fall of about one-half. Really a wonderful correspondence in the increase of production and the fall in price. These actual facts ought to, and do, prove beyond controversy that the fall in the price of silver was not caused by the so-called demonetization of silver by Germany and the restricted coinage by the Latin Union, but solely by the natural and reasonable cause of a great increase of production. While all the foregoing facts have been presented in order to show that the decline in the price and purchasing power of silver was not caused by any demonetization or restriction of coinage of that metal, still, it must ever be remembered that such demonetization and restriction of coinage could not, on principle, be the cause of such fall in price and purchasing power, because the use of a precious metal as money does not cause such a demand for it as will cause an increase either of its price or of its purchasing power.

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CHAPTER VII

OF THE MEANING OF THE EXPRESSIONS, "THE APPRECIATION OF GOLD" AND "THE DEPRECIATION OF GOLD"

§ 1. WE have seen that a change in prices of commodities may be caused by any one of the following causes:

(*a*) If the commodity selected as the standard of value rises in value, the money in use being at par with the standard, then prices will fall; and if the standard fall in value, the money in use remaining at par with it, then prices will rise.

(*b*) If the value of the money in use be depreciated below the value of the standard, then prices will rise; and, if the money in use be appreciated above the value of the standard, prices will fall.

In the above cases the fall or rise of prices will be caused by the changes in the value of gold, or of the money in use, it being the measure of value.

(*c*) The price of a commodity may be more or less according to its location; for instance, the price of a commodity will, naturally, be less at its place of production than it will be at a place distant therefrom.

(*d*) The price of a commodity may rise in consequence of an increase of the demand for the

commodity, or the price may fall in consequence of a diminution of the demand, the supply, in either case, not increasing or diminishing in proportion to the increase or diminution of the demand.

(*e*) The price of a commodity may rise on account of a diminution of the supply of the commodity, or the price may fall on account of an increase of the supply; in either case the demand not decreasing or increasing in proportion to the diminution or increase of the supply.

In the last three cases the rise or fall in prices is occasioned wholly and entirely by causes relating solely to the commodities themselves.

We have also seen that the expansion of credit causes prices generally to rise and the contraction of credit causes prices to fall; to which may be added competition, which, although not coming strictly within the province of a work on money, is yet an element recognized as having an influence on prices.

Now, political economists generally call a fall in prices, whether the fall be occasioned by causes directly relating to gold or money—such as an increasing demand or a diminishing supply, thus increasing its value,—or by causes relating solely to the commodities themselves, or by an expansion of credit or by competition, or by any other cause, "an appreciation of gold or money," and a rise in prices, no matter what causes such rise, a "depreciation of gold or money": that is, that falling prices and appreciation of gold are synonymous terms; and the bimetallist goes still farther, and in-

sists that all falls in prices occasioned by any of the causes above mentioned as affecting prices, or by any other cause, is an appreciation of gold or money, and that it is the fault of, or in, gold or money which causes falling prices; that is to say, whether the fall is occasioned by causes relating solely to gold or money themselves, or by causes relating solely to commodities themselves or by a contraction of credit or by competition; still, in all cases, the cause of the fall in prices is the appreciation of gold or money.

The correctness of the foregoing statement of the bimetallist's position will, I think, be substantiated by the following quotations from two of the most eminent and fairest bimetallists in the country.

F. A. Walker, in his work entitled *International Bimetallism*, pp. 254–256, etc., says:

"But the chief controversy has raged around the question as to the fall of gold prices and the appreciation of gold. These two expressions are by the bimetallists treated as in effect synonymous. Such was the usage of economists without distinction, before this controversy began. Jevons and all other writers who dealt specially with the subject of currency, when they spoke of the fall of gold prices meant an appreciation of gold; when they spoke of the appreciation of gold, they meant only a fall of gold prices. Some monometallists, however, especially from the time of the Herschell Commission, have felt themselves driven to deny the identity of these expressions, and to denounce the use of the word, appreciation, except in a highly technical sense. They declare that it can properly be applied only to cases where the fall of

gold prices results from causes affecting gold, and not from causes affecting commodities. Thus, they would say that, if gold had largely diminished in quantity, commodities remaining the same, there would be a real appreciation of gold, since here the change in prices would result from a change affecting gold; but, on the other hand, if gold remained the same and commodities largely increased, through the discovery of new resources in nature and of new arts in industry, the lower gold prices would not constitute a real case of the apprecation of gold.

"The question is, after all, one of the use of words only. My own view inclines to regarding the term, appreciation of gold, as being the same thing with the fall of general prices (1) Because the two terms have been used in this sense throughout a vast amount of economic literature, by writers of the highest reputation in currency and finance, and that without challenge or question until the controversial necessities of the monometallists caused them to insist upon the distinction. (2) Because, however just may be the distinction between two causes which might operate, at the same time, from different directions, to produce a fall of gold prices, it would be impracticable to divide the result accordingly. No human being could possibly know enough to say how much of such an effect was due to one or to the other of these causes. At the same time we should bear in mind, and be free to state in argument, that an appreciation of gold may sometimes be due to causes affecting the metal, sometimes to causes affecting commodities, sometimes to both in conjunction. This I understand to be the view of Sir Robert Giffen, who, in his testimony before the Commission on Depression in Agriculture, said:

"'We should confine ourselves to a strict use of the

language and speak of the appreciation of money as merely the equivalent of a general fall of prices; and then discuss the question how far and in what sense that can be considered due to the contraction of money.'

"Passing by this point, it may be said that, ever since 1873, there has been an almost continuous fall of prices in terms of gold."

Mr. Walker then proceeds to show by Mr. Sauerbeck's tables that prices have fallen since 1873, in terms of gold; and then states the line of argument on both sides as follows: That bimetallists have treated this result as due, primarily and principally, if not almost wholly, to changes affecting the precious metals; that they declare the demonetization of silver by Germany, and by other states following Germany, created an increased demand for gold just at the time when gold production was declining, and that it was this which caused the fall of gold prices; that they flatly deny the assertion of monometallist writers that the normal demand for metal money is diminishing throughout the civilized world, owing to the introduction of credit substitutes and the various economies in regard to the use of money; that the habits of the people, the rapid development of industry and trade, and the vast increase of travel are all the time making necessary a larger use of metallic money; that many monometallists have undertaken to establish the proposition that there has been no true appreciation of gold; that its increasing power in exchange is wholly due to the multiplication of commodities and the diminishing

cost of production; and refers to the work of Mr. David A. Wells, *Recent Economic Changes;* and then Mr. Walker remarks as follows:

"that such a thesis as that which Mr. Wells, in common with Professor Laughlin and Mr. Atkinson, has undertaken to defend is, on its very face, monstrous and absurd. A number of nations have largely diminished (relatively) their use of silver; and have largely increased, both relatively and absolutely, their use of gold. This *must* have had an effect to lower prices expressed in terms of gold." [1]

Then he quotes Sir Robert Giffen to the effect that if gold or silver is increasing in demand without any corresponding increase in supply, then people who want gold and silver must pay more for them.

Mr. Wells is then criticised because: Many instances he adduces are of such a striking character as to create an altogether undue impression upon the mind of the reader.

Whole classes of instances which he gives of a greatly reduced cost of production are such as concern only the profits of the most favored producers, and are not such as affect perhaps in the slightest degree, the prices at which commodities are sold, which, as is well known, are determined by the cost of production under the least fortunate conditions.

Many of the most impressive examples of the increased power of human labor and capital are drawn only from limited fields or single countries, while vastly larger territories have scarcely felt the slightest

[1] See page 263.

influence from such inventions, discoveries, and improvements in the arts; and, lastly, he overlooks the fact that during the twenty- or twenty-five-year period immediately preceding 1873, during all which time prices were rising, enormous developments of the same general character, in increase of human power in production, took place. Those changes were not of the same absolute importance as the changes described by Mr. Wells; but it is fairly a question whether they were not of equal relative importance. Then Mr. Walker concludes that the truth lies between the two extremes in this matter, and says:

"I hold, with the leading bimetallist writers, (1) That a fall of prices does not necessarily accompany a great reduction in the cost of production as is witnessed by the experience of the world from 1853 to 1873, when enormous changes of this character were taking place, while yet prices not only did not fall but distinctly rose. (2) That, in spite of the introduction of credit substitutes for money and of various economies in the use of money, the tendency of the age is markedly in the direction of a larger demand for metallic money; and that this demand, together with the demand for new gold for the currency of several European nations, has been very inadequately met by the production of the last twenty years. On the other hand, I concede to the monometallists that there has been a notable reduction in the cost of producing very many commodities, which, by itself alone, would tend to bring about some part of the result under consideration." [1]

[1] See pp. 262–265.

Mr. Walker again quotes Sir Robert Giffen, who is disposed to give the greater weight to the scarcity of gold, and the report of six members of the Herschell Commission, to the effect that the fall in prices was the result of both causes, but that the greater part has resulted from causes touching the commodities rather than from an appreciation of the standard.

And then, on page 269, begins a long account of the evils and disasters due to the long-continued fall of prices caused by changes in the money supply; and then goes on reciting the evils and disasters in detail, virtually treating the fall in prices and the evil and disastrous consequences therefrom, as wholly caused by the decreased money supply; or, in other words, by the appreciation of gold.

On page 277, etc., he comments on the credit substitutes for money, and quotes Mr. L. L. Price, who thinks that credit is limited and controlled by the changing dimensions of the cash basis upon which it rests, and that through the bank reserves meeting or restricting the demands for petty cash and permitting an expansion or a curtailment of credit, the supplies of the standard metal exert an important influence on prices ; Professor Jevons, to the effect that credit gives a certain latitude without rendering prices ultimately independent of the metallic basis; Professor Shield Nicholson, to the effect that he compares

"those who adduce the fact that trade is so largely carried on by means of paper as a proof that metallic

money has ceased to be of any great consequence, without reflecting that the paper, itself, is conditioned upon the existence and presence of the metal, to an architect who should declare that it did n't in the least matter of what the foundations of a building consisted, since all the important parts would be supported by the first story."

Mr. Walker then concludes:

"I am convinced that what these economists say regarding this matter is strictly true. While the expansion of the credit system may, in a measure, disguise the influence of a diminishing money supply, it cannot, at the best, wholly offset that influence; while it is fairly a question whether the operations of credit are not less active, rather than more active, when contraction of the currency is going on than when the currency is undergoing a moderatively progressive increase."

E. Benjamin Andrews, President of Brown University, in his work entitled *An Honest Dollar*, has this to say on this question (page 3):

"A rise in prices, or, what is the same, a fall in the value of money, though also an evil, has this incidental advantage, that, unless so marked as to imply undue speculation or other morbid commercial conditions, it tempts money out of its hiding-places into circulation, giving briskness to business. But this never does good enough to compensate for the evil of unsteadiness in the value of money. To have its value persistently the same, —that is the central virtue of good money."

Page 4, etc.:

"Money may have appreciated, first, because the

supply of it has decreased, as by losses of or by new difficulty in extracting precious metal; or, second, because the demand for it has increased, as by absolute enlargement to the volume of work for money to do, or by the lessening of credit and barter exchanges; or, third, because, while those two conditions remain the same, the intrinsic cost of producing given amounts of other articles than money has decreased.

"Now people are very reluctant to look upon it as a fault in money to appreciate in this third way. Yet it certainly is. The contrary notion springs from the effort to think money value as absolute and intrinsic, instead of relative. Here, just as in the other cases, by the only test which can be applied, that of values in general, money has gone astray. It is vain to say that the goods have shrunk but the yardstick remained fixed. Right in the very fact of its remaining fixed lies its vice; since its sole seal and credential as a just scale proceeded from its relation to general commodity. Change in that relation is one, indivisible, indefensible fact, whether originating in the money term of the equation or in the commodity term.

"There is a curious confusion of cause and effect upon this point, which identifies fall of prices with cheapening of commodities. Dr. Barth, editor of the Berlin *Nation*, had in his journal some years since, an article entitled 'The Decline in Prices and Advance in Civilization,' wherein he set forth such decline, not as a *sign* of economic advance, which, under the world's present monetary system it sometimes is, but as itself an element in such advance, which it is not. Hon. David A. Wells falls into the same error in his sixth article on 'Recent Economic Disturbances.' That manufactured and some other commodities have for years been de-

creasing in intrinsic cost, is a great blessing. But it was not necessary that general prices should fall, and this fall has been no less an evil for accompanying a phenomenon in itself a good."

He then proceeds to expound on the evils attending the value fluctuations of money, particularly the calamities occasioned by the appreciation of money. On page 20 he says:

"Money grew precious (prices fell), unsteadily yet surely, all the way from 1809 to 1850, in spite of the relatively enormous increase of those years in the world's store of gold and silver: $135,798,000 in gold, $79,480,700 in silver; $215,278,700 in both.

"From 1851 to 1875 the increase being $3,317,625,000 in gold and $1,359,125,000 in silver, or $4,712,750,000 in both, was tremendous enough to raise prices and cheapen monetary units everywhere; yet in 1873, partly by relative deficit of gold, but mainly by the demonetizing of silver, the law of falling prices, of enrichment to the dollar, reasserted itself, and the effect has continued since."

Pages 18, 19, and 20:

"I by no means allege that the rise and fall of money-value have exactly kept pace with the scarcity and abundance of precious metal. The parallelism has resembled more that between the tides and the motion of the moon. And the ebb and flow of value have confessedly been less marked since the aggregate of money material on earth has grown so immense. Yet it is safe to say that no considerable permanent change in the world's yearly output of gold and silver has ever yet failed

to produce an answering change in the power of money over goods. In a word, vexations in kind entirely like those which rising and falling prices have been occasioning in our day, have dogged men ever since money was invented. In degree, of course, the universal introduction of credit immensely aggravates the trouble. Money has been a great good in the world, but here, as in all other things, bane has mixed with the blessing.

"Is this plague necessary? Must it be perpetual? Is the commercial world, the entire money-using world, to be forever tormented with this accursed up and down in the purchasing power of money?

"The general thought evidently is that the curse is inevitable, something forced upon us by the very nature of things, to be borne as patiently as may be, but gotten rid of never.

. . . . . .

"But should we even see the gold output of 1849–69 duplicated, we should have no right to expect permanent steadfastness in money value. Gold is produced under the law of diminishing return, and hence must in the long future grow more and more scarce, its cost of production greater and greater, while most of the commodities trafficked in by means of money are not under this law, are to grow cheaper and cheaper forever, and almost none are so completely in the clutch of the law as gold is. Manufactured goods, an increasing proportion of all, already much more than half, are only very remotely affected by the law of diminishing return, and will go on cheapening to all time."

He deals with substitutes for money as follows, page 20, etc.:

"It is frequently urged, in reply to considerations like these, that the need for metal money is growing less and less, because of the many money-surrogates coming into use, and the need for money or its surrogates lessening because of the numerous substitutes for money more and more usual each year. Telephone, telegraph and bank checks transfer enormous values every day, without the slightest intervention of money, whether metal or paper; and of the work for which money is requisite still, paper at present performs an immense share, as well as coin could, and even better.

"Any abridgment to the need of money would tend, of course, to lessen the value of money, to bring down its value *pari passu* with that of commodities. But I for my part am unable to see any prospect of a lessened need for money in the future. I find no evidence of any natural, commercial or social causes which are going to reverse the great historic and economic law of falling prices. Let us look at this point with care.

"The facts touching new modes of exchange are important, but their bearing on the problem before us is weaker than has often been supposed."

And then in his argument he alleges:

That clearings have for many years both absolutely and still more relatively to the growth of business and commerce been vastly falling off in England and in this country. Never since 1882 has the New York Clearing-House cleared in an autumn week a sum reaching the billion figure, which was a regular thing that year. That telephone and telegraph only do the work a slower check would do. So it is misleading to allow for all the paper in the

world, since after paper has expelled metal in any land, additions to its volume affect world's prices no more.

That quasi money and substitutes for money aid in cheapening commodities, by rendering less necessary those large stocks of goods, wholesale or retail, which were once indispensable.

But that this cheapening, though in itself an advantage, is indirectly among the worst disturbers of monetary peace, ever helping on that increase in the command of money over goods which is the source of so much woe to the industrial world. Wares being cheaper, are multiplied, exchange among them tending to demand as much money as when fewer and dearer, so that their fall in value, not inducing any fall in money value, continually upsets the power between given amounts of them, and given amounts of money. In so far as the devises named cheapen goods while they lessen the money need in the first instance, their secondary influence is to increase this.

What is the world's or a single country's monetary need? If we were instituting a money system *ab initio*, the main problem would be: What amount of money will "go round"? How much will do all needed money work?

But that when a money system is already in use another question equally weighty must be asked, viz.: Whether or not the supply is bounteous and well regulated enough to render the unit steady in value. Satiable or insatiable, a requirement of the money system to-day is such regulation as may

preserve the purchasing power of the unit of value permanently identical with itself.

That the truck system of paying factory help is dying out.

That twenty years ago barter was common in rural districts; now money is mostly used instead.

That money has mainly supplanted the quasi-barter so common among our fathers in the form of book accounts between neighbors.

That more significant is the division of labor by which many important products, like wagons, harnesses, shoes, and clothing, whose manufacture used to begin and end under the same roof, are now gotten up by a dozen, more or less, different establishments.

The wagon-maker buys his wheels of one man, his bodies of another, his tops of another.

Nearly all country shoemakers, for new work purchase the uppers ready made and the soles all cut, from some city firm.

Blacksmiths no longer make their nails, rarely ever point them, and almost never think of forging a shoe or a bolt. All these things they purchase.

The man who builds your house buys the doors, the shutters, the sash, the window-frames, and the brackets from different parties, ready made, as he, of course, does the metal furnishings. The casings come to him all grooved, chamfered, and ornamented, requiring only to be sawn and nailed.

This breaking up of trades is a momentous industrial phenomenon, and a very great part of the new

exchange work which it entails has to be done by means of money.

That the progress of civilization everywhere must multiply exchanges. In Asia, Africa, and South America it will call for incalculable sums of money, and it is to be remembered that civilization will have to advance far before it can employ substitutes for money to any extent.

That those best able to get credit use it least. In all the wealthiest countries the proportion of cash payments to total volume of trade is steadily increasing. With progress in economic organization, the sphere of credit becomes less extensive, its operation more intensive and useful. That people are everywhere

"more and more replacing book credit by bills, long credit by short, mercantile credits by banking credits, and banking credits themselves they are making more widely effective and available by specializing the organization of financial institutions to particular branches of industry."

President Andrews then concludes the chapter (page 29) as follows:

"Writers and thinkers of the highest ability in increasing numbers believe that all necessary, or all attainable, fixity of general prices is to come from international bimetallism. There can indeed be no doubt that this scheme would for a long time render extraordinary service if it could only be carried into effect. Silver has proved to be a much more trustworthy measure of value than gold, and the two together, if they could, as I be-

lieve possible, be made to circulate concurrently at a fixed ratio in all the main commercial countries, would furnish a more stable gauge of value than even silver could alone."

Again Mr. Andrews, on page 45 of his same work, repeats:

"For instance, nothing is commoner than to hear a reasoner admitting that general prices have indeed fallen, but declaring that the fall has been caused by the cheapening of commodities, not by any appreciation in gold. This is a contradiction. If general (gold) prices have fallen, gold has risen, appreciated. A fall of general prices is nothing else but an elevation in the value of the money in which they are appraised, and this is equally true whatever the cause of the change. Suppose the new relation between gold and goods to have grown solely out of the lessened cost of goods, it is none the less a fact that gold has appreciated, for the appreciation of gold means simply that a given weight of it will buy more wheat, meat, clothing, etc., than it would some time ago.

"What people seem to mean when denying appreciation in gold while admitting that general prices have fallen, is that the altered form of equation between gold and commodities has not originated on the gold side of the balance, namely, has not originated either in any increase of the effort needed to produce gold, or in any increase of the work required of gold money in consequence of the disuse of silver; but has sprung up on the goods side, to wit, has come wholly from a lessening of the effort which men have to put forth to create commodities.

"Distinguished as are the writers vouching for this view, I cannot but think them in error. Doubtless the cost of producing most goods has declined since 1873, but there is no evidence that it has since then lowered a whit more rapidly than between 1850 and 1870, when prices were rising instead of falling. I venture to pronounce this an unanswered and unanswerable argument. Another is, if possible, more decisive still. How can a *régime* of falling costs, which of course means increasing plenty, larger profits, higher wages, be also a *régime* of hard times, panics, strikes, lock-outs, failures, increasing crime and increasing pauperism, such as the gold-using world has passed through since 1873?"

Page 47:

"That certain commodities have not fallen, and that such as have fallen have fallen unequally, in no wise disproves the rise of gold. Part of the fall which has occurred is confessedly owing to lowered costs. Articles thus affected have gone down more than others. Wages of skilled labor have perhaps even risen somewhat as gold has, and the best city lots have risen more than gold."

He then further states that the effort which must be put forth to get gold from the earth is greater than formerly.

"Suppose the said effort to be as before. This would prove the recent fall in prices to be a fall in costs, as so many believe."

"Under this supposition the condition of things will be this: Gold has, say, forty or fifty per cent. more purchasing power than before, but its production demands no more intrinsic effort (metaphysical cost) than before,

while the mercantile or money cost of the labor and capital necessary in extracting it is some twenty-five per cent. less than before. Now the inevitable result of such a situation would be a vast increase in the amount of gold yearly produced, *whereas the amount produced has greatly fallen off instead of increasing*. We are driven to conclude that our initial supposition was erroneous, and that the difficulty of unearthing a grain of gold is now greater than it was in 1873.

"When to this is added that from a billion to a billion and a quarter of new gold money has been called for by Europe and the United States since 1873, to say nothing of the potential demand offered by States now on a paper money basis but preparing to resume specie payments, one need look no further for the reasons why gold units will purchase more now than twenty years ago."

On page 5 of the same work Mr. Andrews says:

"There seem to be many who would concede the unfairness of a monetary unit which admitted of falling prices if assumed that the fall arose from an increased cost of production in money itself, who allege the equity of the money provided the fall has proceeded from lessened cost of producing goods. But this, again, is an untenable position, unless the just noted premise touching the importance of a stable monetary unit is false. It can make no difference why the relation between money and commodity has changed. The simple fact of such change is proof that the money system is imperfect."

And on pages 40 and 41 he further says:

"That the value of money metal, under any system, is fixed by the relation of demand and supply, all admit.

But while law cannot control value independently of supply and demand, it can set free an economic force which will largely control supply and demand themselves.

"The bimetallist affirms (1) that the monetary demand and supply of gold and silver, supposing both freely coined, in fixing the purchasing power of given quantities of them, overwhelmingly out-influence the commodity demand and supply; (2) that law can at least establish a legal-tender and debt-paying parity between a given quantity of gold and a given quantity of silver, which parity a treaty could extend throughout any number of States; (3) that, since men are wont to discharge their pecuniary obligations as easily as they can, the existence of such legal-tender and debt-paying parity would, in case this legal parity should ever for any reason fail to match the commercial parity, stimulate the demand for the cheaper metal, appreciate it, and so tend to identify the parities again; (4) that if the field of legal parity is large, embracing in its bimetallic basin a third or even a quarter of the world's gold and silver, unless the value-ratio between the two metals denoted by the legal parity is wildly at variance with the ratio in quantity between the total stocks of the two, the aforesaid stimulus of demand for the cheaper will overbear every tendency to part the parities named, and maintain the unit quantity of gold and the unit quantity of silver perpetually at the same value."

§ 2. The several points presented in the foregoing quotations may, I think, be stated, generally, in the following propositions:

(1) That even if a fall of general prices is the result of a cheapening of commodities, yet the cause of the fall in prices is the appreciation of gold; for

an appreciation of gold simply means that a given quantity of it will buy more wheat, meat, clothing etc., than it did before.

(2) That a fall in prices does not necessarily follow from a great reduction in the cost of producing commodities.

(3) That the use of credit as a substitute for money is growing less and less, and that, notwithstanding the use of credit and of the various economies in the use of money, the tendency of the age is markedly in the direction of a larger demand for metallic money, and this demand, with the demand for new gold for the currencies of several European nations, has been very inadequately met by the production of gold the last twenty years.

(4) That the demonetization of silver by Germany, followed by the action of the Latin Union in restricting the coinage of silver on private account, has caused the fall in prices—the fall in gold prices.

(5) That with the restoration of bimetallism, the monetary demand and supply of gold and silver, supposing both freely coined, in fixing the purchasing power of given quantities of them, will overwhelmingly out-influence the commodity demand and supply, and will secure all necessary fixity of general prices.

§ 3. I am not going into any defence of gold. I shall neither praise nor condemn it. It is a matter of no consequence, whatever, what my opinion may be as to the desirability of using gold as our primary money and as our standard of value; nor is it of any consequence what my opinion may be as to the use

or disuse of silver as primary money. I find gold actually used as our primary money and as our standard of value, and I assume that the commercial world so uses gold because it finds it convenient and advantageous to do so; for, if it did not, it could readily make a change and use some other commodity; and there is nothing to prevent it from using silver for such money and as such standard if it wants to use it for these purposes. The law does not prevent the commercial world from so using silver if it so wishes. All international payments might be made in silver bullion as well as in gold bullion if only the commercial world would accept the silver for that purpose; but the trouble is that the commercial world refuses so to use silver, and insists upon using gold. Since, then, gold is the primary money and the standard of value, and since it is charged that prices have greatly fallen, and that the appreciation of gold has been the cause of such fall in prices, it becomes pertinent, in a work of this kind, to inquire whether, assuming that prices have fallen, all the fall in prices, or the whole of the fall in general prices has been caused by the apprecation of gold, and whether gold should be held responsible (as it is charged to be) for all the evil consequences alleged to have been the result of such fall in prices.

Mr. Walker's reasons for charging all of the fall in prices to changes in the value of gold have at least the merit of novelty. His reasons are that political economists have treated the two expressions—fall in prices and appreciation of gold—as synonymous, and that no matter how just may be the distinction be-

tween the two causes which might operate at the same time from different directions to produce a fall of gold prices, it would be impracticable to divide the result accordingly. As to the first reason, it is sufficient to say that, because a certain result, which is the effect of either the one or the other of two causes, is given a certain name, or two certain names which are synonymous, furnishes no reason for holding that the result in all cases is the effect of but one of the causes; particularly, it cannot be so held when it is shown that the effect is the result of the other cause; and as to the second reason, that because it may be difficult to divide the result and determine which of the causes is responsible for the result, therefore, one of the causes must be charged with the whole responsibility for the result, I have merely to say, that a mere statement of it shows its unjustness.

However, Mr. Walker does admit the justness of the distinction between the two causes, and that an appreciation of gold may sometimes be due to causes affecting the metal, and sometimes to causes affecting commodities, sometimes to both in conjunction. But since he, after concluding that the fall of prices since 1873 was due partly to both causes, that is, partly to causes affecting gold itself, and partly to causes affecting commodities themselves, goes on in his argument and lays the whole blame, for the fall of prices and for all the train of evils and calamities which, he says, were caused by such fall in prices, to an increase in the value of gold on account of its growing scarcity, we cannot do otherwise than treat

his argument as if he made no distinction whatever between the two causes, just the same as Mr. Andrews makes no such distinction.

Professor Andrews lays down three propositions as to how money may be appreciated:

(1) Because the supply of it has decreased, as by losses of, or by new difficulty in extracting precious metal; or

(2) Because the demand for it has increased, as by enlargement to the volume of work for money to do; or by the lessening of credit and barter exchanges; or

(3) Because while those two conditions remain the same, the intrinsic cost of producing given amounts of other articles than money has decreased.

Mr. Andrews's first and second propositions are nothing more than the quantity theory, which has been disposed of in the fifth chapter of this work; and this quantity theory having been shown to be incorrect and unsound in principle, it follows that these two propositions made by Mr. Andrews are incorrect and unsound in principle. The truth is, that neither the supply of, nor the demand for, money as money has anything to do with prices, and this has been abundantly shown in the said fifth chapter of this work. The first proposition is, however, unsound under the quantity theory. If that theory be correct, then the supply of money, even though there were losses of and increased difficulty in extracting precious metal, would not be decreased. The supply of money would remain the same, and it is, under this theory, only the actual increase or

decrease of the supply of money which affects its value; if the supply of money remains the same but a subsequent increase to the volume of work for money to do arises, then, it is the increase of the volume of work money has to do, and not the losses of or the new difficulty of extracting precious metal which causes the fall in prices; or, as Mr. Andrews calls it, the appreciation of money. If, however, Mr. Andrews means that the value of the money depends upon the value of the metal contained in it, and hence, if through scarcity or a diminished supply of the metal, the value of the metal should be increased, the value of the money will also be increased—appreciated—then I am in perfect accord with him. In this sense the proposition is sound, but it is, as shown in the already mentioned fifth chapter of this work, absolutely inconsistent with, and antagonistic to, the quantity theory.

We now proceed to discuss Mr. Andrews's third proposition, which is as follows: That money will be appreciated in value although the supply of, and the demand for, it remain the same, if the intrinsic cost of producing given amounts of other articles than money has decreased.

It will be admitted for the present, for the purposes of this discussion, that there has been a fall in the prices of many commodities since 1873. The bimetallist admits that the cost of producing most goods and productions has greatly declined since 1873. We then start out in the discussion with these two important facts admitted. The question then is, is this fall in prices due to the appreciation

of gold, or is it due to the lowered cost of production and to an increased supply of commodities, or to both? that is, is the fall of prices due to causes affecting gold, or to causes affecting the commodities? The fall of prices is an effect, and, like every other effect, must have a cause. Now, then, what cause produced this effect?

The bimetallist insists that, although the fall in prices has grown out of, or resulted solely from, the lessened cost of production of the goods, still the fall of prices was or is caused by the appreciation of gold, and he argues that, "it is vain to say that the goods have shrunk, but the yardstick remained fixed; that right in the very fact of money remaining fixed lies its vice, since its sole seal and credential as a just scale proceeded from its relation to general commodity. Change in that relation is one indivisible, indefensible fact, whether originating in the money term of the equation or in the commodity term." This is the whole of the bimetallist's argument on this point. The remainder of the above quotations are merely facts and reasons given in support of the argument.

They say that in the very fact of money remaining fixed, etc. I presume they mean by this, that in the very fact of the value of money remaining fixed lies its vice. Now, if the value of money remains fixed, as the length of the yardstick remains fixed, then it would be impossible for the value of money to change; an increase of supply or of demand could not change its value, any more than an increase of the supply of or of the demand for yard-

sticks could change the length of the yardstick. If, then, there would ever be any change in the relation between the value of money and the value of commodities, such change must, of necessity, be in the commodities and not in the money; and with no degree of propriety could it be said that the value of money had appreciated, for, in the case supposed, that would be impossible, and the impossible could not be the cause of the change. The cause would simply be in the lowered value of the commodities themselves, for they, and they alone, could change in value. Take for illustration the piece of cloth and the yardstick mentioned by Mr. Andrews. If that piece of cloth were measured to-day and found to contain a given number of yards, and to-morrow a piece were taken off the cloth and its whole length reduced, and afterwards the piece were again measured and found to contain a less number of yards than before, would anyone say that the cause of the piece of cloth being shorter was the appreciation of the length of the yardstick? And yet this could as well be said of the yardstick as of the money in the case put above. It is this persistently insisting upon subjecting the metal used as money to laws to which other commodities are not subject, which makes so much trouble and confusion of thought in questions relating to money. But the value of money is not fixed as the length of the yardstick is fixed, for money is subject to the same changes in value as the metal contained in it is; if, on account of changes in the supply of, or demand for, the metal its value rises or falls, the value of money rises

or falls with it. The value of the metal is relative, but so is the value of every other commodity; for value is only a relation. Now, when we come to measuring the value or the price of a commodity with money, what we really do is to ascertain how many times the value of the metal contained in a certain piece of money, fixed upon as the measure, is contained in the value of the commodity; that is, how many times the value of a piece of metal of a certain weight and fineness is contained in the value of the commodity, and the result gives us the price. But it necessarily results, and such is always the case, that while money is measuring the price of the commodity, the commodity is measuring the value of the money, for the measurement is but a comparison, and each is compared and measured with the other, and the one compares and measures just as much as the other does. The value of the piece of metal is found to be contained a given number of times in the commodity, and the commodity is found to contain the value of the piece of metal a given number of times. Now, if at any subsequent measurement or comparison, it is found that the relation between the value of the piece of metal and the value of the commodity has changed, as, for instance, that the value of the piece of metal is contained a less number of times in the value of the commodity, or, in other words, that the price of the commodity has fallen, then the important question arises, what was the cause of the change? Was it on account of something relating to the piece of metal, or of something relating to the commodity?

if the former, then the value of money has risen; if the latter, then the value of the commodity has fallen; but, if the latter is the cause, it can never be correct to say, that the value of the former, the piece of metal, has risen or appreciated, and to charge the whole fault upon the piece of metal; or, if the cause of the fall in price was on account of something connected with the piece of metal, it can never be correct to say that the fall was on account of something connected with the commodity. Nor is it any answer to this to say that, since the sole seal and credential of money as a just scale proceeds from its relation to general commodity and that change in that relation is one indivisible fact, because as money measures the commodity so the commodity measures and is the scale of money, and it may with equal propriety be said, since commodity's sole seal and credential as a just scale proceeds from its relation to money, change in that relation is one, indivisible, indefensible fact, whether originating in the commodity term of the equation, or in the money term, and from this insist that, although the change in the price or in the relation, was wholly due to causes affecting the money, the fall in price was caused by the depreciation of the commodity in value. A commodity has its purchasing power as well as money, and if the fall in the price of it is the result of causes affecting money, the commodity will preserve the same value, even though it brings a less price in money; because the amount of money it sells for will have the same purchasing power as the larger amount of money for which it would have

previously sold would have then had; therefore the commodity has lost none of its value—purchasing power—by reason of such fall in price.

If, on account of drouth or from any other cause, there is a great failure of the crops of all agricultural products in one country, and the prices of such products are enhanced in that country, while, at the same time, by reason of a bountiful harvest in another country the prices of such products fall in that other country, if the appreciation of money is the cause of the rise in such prices, then, the depreciation of money must, at the same time, be the cause of the fall in prices. I suppose the way out is to insist that either way gold is at fault.

Take the case put by Mr. Walker in his criticism of Mr. Wells, where a country has not felt the slightest influence from inventions, discoveries, and improvements in the arts, whereby the cost of producing all manufactured products is reduced, and, consequently, the prices of such manufactured products have either remained stationary, or have risen, or at all events are higher than they are in a country where the inventions, discoveries, and improvements in the arts are developed and applied to the highest degree in the manufacture of products; what will be said to have caused both the rise and the fall of prices at the same time? Will it still be insisted that both have been caused by the appreciation and depreciation of money at the same time? The fairness of these examples cannot be attacked because the rise and the fall of prices are located in different countries, for the same will apply with equal force

to different sections of the same country. Nor can exception be taken to them because it only relates to a portion of the existing commodities, because agricultural and manufactured products embrace by far the greater part of all productions. No one has ever pretended that the prices of all productions have fallen, much less has any such fall ever been proven. What is contended is that there has been a general fall; indeed I am not so sure but that Mr. Andrews means the fall of any one or more products; but of this again; but even if the suppositious case of but one commodity were put, I think that would be fair enough as an example, because a general fall can only be ascertained by the separate measurement or comparison of each commodity included in general commodity.

Mr. Andrews in his third proposition speaks of "given amounts of other articles than money." Literally, this would mean any limited number of articles or even one article, while in the next paragraph he speaks of money, "as a just scale proceeded from its relation to general commodity." Just which he means I am unable to determine; but if he means general commodity, he is answered; if he means a limited number of commodities, then while the prices of some commodities may have fallen the prices of others may have risen, and the question under his theory arises, whether gold or money has appreciated or depreciated. Because prices have fallen it is all wrong, is only "sticking in the bark," to refuse to go further and ascertain the true cause of such fall, and it is a still greater wrong to charge

all the fault to gold in every case, no matter what may have been the cause.

§ 4. The next proposition as laid down in the second section of this chapter is, (2) That a fall in prices does not necessarily follow from a great reduction in the cost of producing commodities, or, as Mr. Andrews states it, it was not necessary that general prices should fall because of the decreasing intrinsic cost of manufactured and some other commodities.

Mr. Walker, after stating that many monometallists have undertaken to establish the proposition that there has been no true appreciation of gold; that its increasing power in exchange is wholly due to the multiplication of commodities and their diminishing cost of production, refers to the work of Mr. David A. Wells, *Recent Economic Changes*. Then Mr. Walker says:

"that such a thesis as that which Mr. Wells, in common with Professor Laughlin and Mr. Atkinson, has undertaken to defend is, on its very face, monstrous and absurd. A number of nations have largely diminished (relatively) their use of silver; and have largely increased, both relatively and absolutely, their use of gold. This *must* have had an effect to lower prices, expressed in terms of gold."

Mr. Walker then follows with a criticism of Mr. Wells's book. It is not necessary for me to enter into any defence of either Mr. Wells, Professor Laughlin, or Mr. Atkinson; each of these gentlemen is abundantly able to take care of himself. I have

not enjoyed either the pleasure or the profit of a perusal of Mr. Wells's book, but I conclude from the nature of Mr. Walker's criticisms that Mr. Wells must have made out an unusually strong case against bimetallism. The first criticism is that many of the instances adduced by Mr. Wells are of such a striking character as to create an altogether undue impression upon the mind of the reader. Mr. Walker does not explain what these striking characteristics are, but he does not state that the instances given *are not true;* hence I conclude that what Mr. Walker means is that the instances given are so strong and convincing that they are apt to convey the impression upon the mind of the reader that in all other instances the fall of prices was due to the decreased cost of production.

The next criticism is, that whole classes of instances which Mr. Wells gives of a greatly reduced cost of production are such as concern only the profits of the most favored producers, and are not such as affect, perhaps in the slightest degree, the prices at which commodities are sold, which, as is well known, are determined by the cost of production under the least fortunate conditions. Mr. Walker does not explain of what commodities these whole classes consist, but he is certainly mistaken as to the decreased cost of production not having the effect of decreasing prices, for competition would, of itself, bring about this result, and the price is not determined by the cost of production under the least fortunate conditions, and cannot be, because the competition of the more fortunate

producers would soon drive out the unfortunate one.

The next criticism is, that many of the most impressive examples of the increased power of human labor and capital are drawn only from limited fields or single countries, while vastly larger territories have scarcely felt the slightest influence from such inventions, discoveries, and improvements in the arts. If the field of decreased cost of production is limited, this cannot make the examples wrong, because the decrease of the cost of production will decrease the prices, not only at the place of production, but, also, over the whole field of consumption; the only difference between the prices at the place of production and at places distant therefrom would, in a state of freedom in trade, be the cost of transportation and the profits of the various middlemen. If it be so that vast territories have scarcely felt the influence of the decreased cost of production, then in these territories gold has not appreciated.

The last criticism is, that Mr. Wells overlooks the fact that during the twenty- or twenty-five-year period preceding 1873, during all which time prices were rising, enormous developments of the same general character in the increase of human power and production took place. This brings us to one of the strongest points made by the bimetallist. He claims that the decreased cost of production was just as great during the period of 1850 to 1873 as during the period since 1873, and yet from 1850–1873 prices rose, while they fell since 1873, and President Andrews pronounces this to be "an unanswered and

unanswerable argument." The point makes necessary a brief consideration of the history of the production of precious metals, of prices, and of panics during the period 1850–1873.

As there were three commercial crises, or panics, during the period under consideration,—one, and a very severe one, in 1857, one rather mild one in 1866, and the most severe one in all our financial history occurred in 1873,—the whole period will, for convenience, be divided into subperiods: 1850–1857, 1857–1866, and 1867–1873. The increased production of gold consequent upon its discovery in California and Australia began to manifest itself in 1850.

For the period 1831–1840 the average annual production of gold in the world was . . .	$ 13,484,000
For the period 1841–1850 it was	36,393,000
For the period 1851–1855 it was	132,513,000
And for the years 1856 and 1857 it was . . .	134,083,000
For the period 1850–1857 the whole production was about	967,000,000
For the period 1858–1866 the average annual production was about	127,500,000
and the whole production was about . . .	1,147,000,000
For the period 1867–1873 the average annual production was about	123,200,000
and the whole production was about . . .	865,177,000
For the whole period 1850–1873 the whole production was about	3,000,000,000
and the average annual production was about . .	124,130,000

While we are at this production of gold we may as well continue it from 1873 to the present; it will save time to do so. The lowest production during this period was from 1881–1885, when the average

annual production fell from $115,577,000 in 1873 to $99,116,000.

After 1885, the production rapidly increased until the year 1896 when it reached the enormous figure of $202,956,000, vastly larger than any year during the period 1850–1873.

For the period 1874–1885 the whole production was,	$1,298,667,000
and the average annual production was something over	108,000,000
For the period 1886–1890 the whole production was about	564,500,000
and the annual average production was about	113,000,000
The whole production for the period 1874–1890 was about	1,863,000,000
and the annual average production for the same period was about	109,600,000
For the period 1891–1896 the whole production was over	1,018,230,000
and the annual production was over	169,700,000
For the whole period from 1873 to 1896 the whole production was about	2,881,373,000
and the average annual production was about	125,300,000

According to Soetbeer, the index number for the prices of 114 articles for the period 1847–1850 was 100.00
In 1857 it was 130.11
" 1866 " " 125.85
" 1873 " " 138.28

Showing a great rise from 1850 to 1857, a slight fall in 1866, and a still greater rise up to 1873, when it reached the highest point, and probably the highest point of the present century. Of course prices fell some after the panic of 1857 and after the panic of 1866, commenced rising again between 1857 and 1866, and between 1866 and 1873, and, naturally, as

the panic of 1873 was by far the most severe of all, prices would depreciate more after it than after the previous panics.

Now, although there may have been just as great improvement in production and in the increase of human power, and relatively as great a lessened cost of production during the period 1850–1873, as there has been since 1873 (which I by no means admit, except for the purposes of the argument), yet this lessened cost of production, 1850–1873, was accompanied by the immense and unprecedented increase in the production of gold, and this vast increase of gold was not only sufficient to overcome all the fall of prices on account of decreased cost of production, but was also sufficient to actually increase prices above what they would have been had there been no lessened cost of production, and this fully accounts for the rise of prices during the period 1850–1873. On the other hand, while admittedly there has been a greatly lessened cost of production since 1873, yet accompanying for a time this lessened cost was a decrease in the production of gold as compared with the production prior to 1873. Now, this decrease in the production of gold since 1873 was not great enough to cause any rise in the value of gold itself. The average annual production prior to 1873 was $124,130,000. The average annual production during the period 1873 to 1890 was $109,600,000, and the average annual production during the period 1873 to 1896 was $125,300,000. Certainly, these decreases in production were not sufficient, considering the large supply of gold in the

world, to reduce its supply to such an extent as to cause a real appreciation of gold itself; but, while they would not cause an appreciation of gold itself, still, the annual production of gold was not sufficient to keep on increasing the supply to such an extent as to cause a depreciation of gold, to meet and counteract the great tendency of prices to fall on account of the increased supply of commodities, and of the lessened cost of production of commodities; and this left the increased production and supply of commodities and the lessened cost of the production of commodities free to operate without any check, hindrance, or counteracting influence, and to give full effect to their tendency to decrease prices. This is sufficient to account for the differences in prices between 1850–1873 and since 1873; and it clearly shows that there has been no real appreciation of gold, and that the alleged fall in prices since 1873 has not been due to any cause affecting gold, but wholly to causes relating solely to commodities. It is no answer to this to say that, while it may be true that the production of gold since 1873 has been sufficient to maintain its value, or rather to prevent its appreciation, in the absence of any unusual demand, yet that the unusually great demand for gold for monetary purposes since 1873 was sufficient to cause its appreciation. This is no answer at all, because, as has been shown in the immediately preceding chapter of this work, the monetary demand (even admitting that there was an unusual monetary demand, which is denied) for gold will not cause an increase of its price or of its purchasing power.

As to hard times, panics, strikes, lockouts, failures, crime and pauperism, these have been no worse and no greater relatively since 1873 than before. We had all these things, and in plenty, between 1850 and 1873. Those very times, of increasing prices, which Mr. Walker says are a blessing and Mr. Andrews says are a curse, brought on the most severe panic in our history, and caused more business distress and suffering than any subsequent times have.

§ 5. We come now to the third proposition as stated in the second section of this chapter.

The bimetallist, in his endeavors to minimize the effects of credit and the other various economies in the use of money, and in order to show that credit and these economies do not accomplish as great a saving of money as is generally supposed, advances the following reasons in support of his contention:

(1) That credit is limited and controlled by the changing dimensions of the basis of cash on which it rests, and that through the bank reserves permitting an expansion or curtailment of credit, the supplies of the standard metal exert an important influence on prices.

(2) That Professor Jevons states that credit gives a certain latitude without rendering prices ultimately independent of the metallic basis.

(3) That paper is conditioned upon the existence and presence of the metal.

(4) That the tendency of the age is in the direction of a large demand for metallic money.

(5) That clearings have for many years both absolutely and still more relatively fallen off in England

and in this country. Never since 1882 has the New York Clearing-House cleared in an autumn week a sum reaching the billion figure, which was a regular thing that year.

(6) That it is misleading to allow for all the paper in the world, since after paper has expelled metal in any land, additions to its volume affect world's prices no more.

(7) That quasi-money and substitutes for money aid in cheapening commodities:

(*a*) By rendering less necessary those large stocks of goods, wholesale or retail, which were once indispensable.

(*b*) But this cheapening though in itself an advantage is ever helping on that increase in the command of money over goods.

(*c*) Wares being cheaper are multiplied, exchange among them tending to demand as much money as when fewer and dearer, so that their fall in value, not inducing any fall in money value, continually upsets the par between given amounts of them and given amounts of money.

(8) The truck system is dying out.

(9) That money is now being mostly used instead of barter.

(10) That money has supplanted the custom of traders setting off their mutual accounts against each other.

(11) That the wagon-maker buys his wheels of one man, his bodies of another, his tops of another.

The shoemaker buys the uppers ready made and the soles all cut.

The blacksmith makes no more nails, rarely ever points them, and never thinks of forging a shoe or a bolt.

That the man who builds your house buys the doors, the shutters, the sash, the window-frames, and the brackets from different parties ready made, as he does the metal finishings. The casings come to him all grooved, chamfered, and ornamented, requiring only to be sawn and nailed.

A greater part of this new exchange work has to be done by means of money.

(12) That the progress of civilization in Asia, Africa, and South America will call for incalculable sums of money.

(13) That with progress in economic organization, the sphere of credit becomes less extensive and the proportion of cash payments to the total volume of business is steadily increasing.

(1) The first reason assumes, without any evidence, that the basis of credit is cash; but it has been shown that credit does not rest or depend on the quantity of money, but is independent of the quantity of money; and while it is one of the principles advocated in this work, that the supplies of the standard metal do exert an influence on prices, yet it is also shown that prices are not influenced by the quantity of money. As a rule, bank reserves are not depleted until after speculation and credit have expanded to such an extent that the former explodes and the latter collapses; confidence is destroyed, and it is then that a drain begins on the banks, and they then curtail credit. Considering the great dis-

proportion between the amount of bank reserves and the volume of credits, the influence of the former on the latter must be very slight, if they have any influence at all. If bank reserves control credit, they certainly give it a most extraordinarily wide latitude for expansion before they exert any restraining influence.

(2) Professor Jevons is correctly quoted as far as it goes, but he further states:

"It is credit or the creation of *prospective gold* which allows prices to continue rising for a time while gold is decreasing." "The *Variation of Prices* show that on an average prices rose 22½ per cent. between 1833 and 1839, and fell twenty-five per cent. between this last year and 1844. So far as I have been able to discover, this great oscillation was entirely due to the general expansion of trade and credit, and to its subsequent collapse, etc."

Nothing here to indicate that Jevons held that credit was dependent upon the quantity of money. If the quantity of money limits the expansion of credit, why does it not limit the fall of credit?

(3) That paper is conditioned on the existence of the metal counts for nothing. By being conditioned does not mean that there must at all times be as much metal money in circulation as there are Government and bank notes, negotiable notes, bills of exchange, etc., and the various other credit paper instruments outstanding; that would simply be impossible. Besides, it makes no difference whether this paper is conditioned on the metal or

not, it does not limit the credit. And, again, paper is but the smallest part of credit, and a very small part in proportion to the whole.

(4) It would be hard to prove that the tendency of the age is in the direction of a larger demand for metallic money, and, I presume, for this reason, the bimetallist does not attempt to prove it, but contents himself with a simple assumption of the fact.

(5) If clearings have fallen off in England and in this country for some years past, it is nothing more than what was to be expected from the depression of business. If the volume of trade declined, of course the volume of clearings would decline with it. This shows the unfairness of the bimetallist's argument. He not only uses the fact that clearings may have declined in volume, as an evidence of a falling off in the use of credit, but he endeavors to magnify the extent of this falling off by assuming that the volume of business has increased, when everyone knows that the business had decreased in volume at the time these bimetallists wrote. Clearings decline in volume, not because the use of credit is falling off, but because of the depression of trade and the consequent decline in the volume of business actually transacted. It is not a fair test by which to determine whether the use of credit is declining, to only take up the clearing-house, which is only a part of the system of credit, and then confine the comparison to the clearings of one particular season of one particular year in one particular city. If the clearings have fallen off in the autumn months in New York, investigation will show that, where the falling

off was not caused by the general cause of depression of trade, it was caused by special causes, having nothing whatever to do with credit generally. The clearings in New York were larger during the year 1890 than they were for the year 1880. The clearings for the whole country in 1884 were $47,387,408,275. In 1891 they amounted to $56,803,253,957, in 1895 to $50,872,674,108, and in 1896 to $51,977,799,114. The decline between 1891 and 1895 shows the effects of the panic of 1893, and the advance in 1896 shows that business was then beginning to revive. On the whole, then, the clearings do not indicate a falling off in the use of credit, but rather an increased use of credit.

(6) It is misleading to allow for all the paper money, not only after it has driven out all the metal money, but also before, because paper money has no influence whatever on prices unless it is depreciated. If it is kept up to the standard, it cannot have any effect on prices. All this has been heretofore conclusively shown.

(7) That quasi-money and substitutes for money aid in cheapening commodities is certainly a novel proposition. The general opinion has been that credit stimulated demand, and the increased demand caused increased prices. How no longer rendering necessary those large stocks of goods, wholesale and retail—if the fact were true, which it is not—can cheapen commodities is not explained, and is incapable of explanation. Then the bimetallist says: Wares being cheaper are multiplied, and exchange among them tend to demand as much

money as when fewer and dearer, so that their fall in value, not inducing any fall in money value, continually upsets the par between given amounts of them and given amounts of money. Here at last we have the confession that it is the cheapening of wares which is continually upsetting the par between given amounts of them and given amounts of money. This par is price; and so, after all, we find that it is the wares, and not the money, which are the cause of the fall of prices. Just one observation more before dropping this 7th reason. This reason has nothing to do with the question, for, even if credit does have the effect of lowering prices, it does not follow that credit has been, or will be, any the less used; and if credit has any such effect, then gold, or money, cannot be the cause of the fall in prices.

(8 and 9) The truck system and barter have been dying out these many years. Years ago both of these systems, as here understood, died out to such an extent that any subsequent decline in their use is wholly without any influence or effect.

(10) I by no means admit that money has supplanted the custom of traders setting off their mutual accounts against each other, but even if it were so, the setting off of the accounts is simply transferred from the book settlement to a set-off through the banks. All traders keep bank accounts, and pay and receive payments in checks.

(11) Just how the facts, that a shoemaker buys his uppers, the wagon-maker his wheels, the blacksmith his nails, and a building contractor his doors, shutters, etc., create a greater use or demand for

money is not made apparent. Before the division of this work these traders purchased from just as many persons; the division creates no increase in the number of transactions—the shoemaker bought his leather, the wagon-maker the lumber, the blacksmith his iron, and the building contractor the lumber. Besides, even if the number of transactions were increased, it would make no difference in the amount of actual money required, for every one of these traders and manufacturers keeps his bank account, and pays his bills by checks on his bank.

(12) As civilization progresses in Asia, Africa, and South America the use of credits and other economies in the use of money will progress with it, and so will money.

(13) This reason is practically a repetition of the former one, that the tendency is to use more metallic money. How, why, or when the sphere of credit becomes less extensive with progress in economic organization is not explained; and it is not the fact, nor is it the fact that the proportion of cash payments to the total volume of trade is steadily increasing. Nor does any such a conclusion follow from the fact that those who are best able to get credit use it least.

There is considerable confusion in the foregoing reasons in the use of the word "credit." The word, credit, like many other words, is used in several senses. One of these senses is the trust and confidence which one man reposes in another man, and the bestowal of this trust and confidence gives credit to the recipient. It is this trust and confi-

dence which one man reposes in another which induces the former to part with his property—sell or loan it to the latter on the promise by the latter to pay for, or to return it, at some future time; and it is the purchaser's or borrower's credit which enables him to acquire property, or the use of property, without immediate payment. This form of credit is purchasing power, and we have seen how tremendous is its effect upon prices; but it is not a means of payment, and, consequently, does not lessen the use of money, for though, originally, goods were purchased on credit, they may have to be paid for eventually in money.

Another sense in which the word "credit" is used is as the name of a system for the payment of indebtedness or other liabilities, such as mutual accounts being set off against each other, payments made through banks, etc., without the use of money at all. This form of credit implies the former, but it has no effect on prices, unless it be through the quantity theory of money—that is, by decreasing the demand for money, less of it is required and it will fall in its value, and prices will rise.

The first, second, sixth, seventh, and thirteenth reasons above given in support of the claim that the use of credit is lessening, refer to the first sense in which the word "credit" is applied, and have nothing whatever to do with the quantity of money which may be required.

The remaining reasons all relate to the quantity theory of money; the argument is that on account of the falling off in the use of credit as a means of

payment, more money will be required for use; that the supply of money will not keep up with this demand, and hence that prices must fall. But we have seen that the quantity theory is not correct, and that it has no influence whatever on prices, and therefore all this long and painful enumeration of the different reasons to prove that the use of credit is declining is in vain, and goes for naught. They do not meet the issue.

In considering this question of credits, the bimetallist, for some unaccountable reason, has wholly overlooked banks. Now, of all the economies for the use of money and instruments of credit, a bank is, by all odds, the most effective and far reaching. Everybody knows this, and everybody knows, too, that banks are constantly increasing, not only in the older communities but in new settlements, and that the range of their depositors is constantly extending and the number increasing. Farmers and others who, not so many years ago, refused to have any dealings with a bank, now keep accounts with one and do their business and make their payments through it; in fact, they are often the principal support of the bank in their community. In the face of these well-known facts, it is idle to talk of credit being on the decline.

But all this talk and long discussion about credit is wide of the mark, and has nothing whatever to do with the main question. The question is, has gold appreciated in value on account of causes appertaining to itself? Credit has no bearing on this question; it neither increases nor decreases the supply

of gold; and if the increase or decrease of credit affects the monetary demand for gold, that can make no difference in the value or the purchasing power of gold, because, as we have shown, the monetary demand for gold or the use of gold as money, does not increase its purchasing power, and that, so far as this purchasing power is concerned, it is immaterial whether much or little gold is used, or is required to be used, as money. The production of gold since 1873, if it has done no more, has, at least, certainly, been sufficient to keep the value of gold stationary, and to prevent it from appreciating in value.

Mr. Andrews puts a case, that, if gold has forty or fifty per cent. more purchasing power but its production requires no more intrinsic effort than before, while the mercantile cost of the labor and capital is twenty-five per cent. less than before, the inevitable result would be a vast increase of production; whereas the production has declined, therefore, the effort which must be put forth to get gold is greater than formerly. What is here meant by "effort" but cost?—he says metaphysical cost; but is not effort in this connection cost—real cost—which some economists call costs, others sacrifice? Now, if the increased effort is increased cost, then there could not be a reduction of the cost of labor and capital. What is meant by metaphysical cost? If it means any cost outside of actual cost, then it don't count; actual cost is what is effective. If effort is metaphysical cost, then, the greater effort to get gold is only a metaphysically greater cost, and not a real

cost, so that the real actual cost of production is no greater than before. However, it is immaterial just what Mr. Andrews means, the fact is, the production of gold, as shown above, has vastly increased—greater than ever before in the history of the world.

§ 6. The proposition next to be considered is, that the demonetization of silver by Germany in 1873, followed by the action of the Latin Union restricting the coinage of silver on private account, the demonetization of silver by the United States in 1873, and its demand for gold for the purposes of resumption of specie payment in 1879, have caused the fall of gold prices.

This need not detain us very long at present. The argument is, that the demonetization of silver by Germany withdrew a large amount of silver from circulation, causing an increased demand for gold for use as money; that the gold required by the United States for resumption also increased the monetary demand for gold; that all these demands, together with all the other monetary demands for gold, caused an appreciation of the value of gold, and hence that gold prices of commodities fell. It now remains only necessary to recall what has already been proven, to wit: That the quantity of gold required by Germany to replace the displaced silver was too small to have any such effect as falling prices; that the States of the Latin Union did not displace any silver, and hence required no additional gold; that the gold accumulated by the United States for resumption in 1879 was too small to create any fall in prices; was not,

in fact, followed by any fall in prices; and that, finally and conclusively, the monetary demand for gold is not such a demand as will increase its purchasing power, and, consequently, that any additional demand for that purpose will not increase the purchasing power of gold. From which it follows that there has been no appreciation of gold on account of causes affecting gold itself.

§ 7. The next proposition is that under bimetallism the demand and supply of gold and silver in fixing the purchasing power of given quantities of them, overwhelmingly out-influence the commodity supply and demand, and will secure all necessary fixity of general prices.

It is proposed to only make one or two observations on this proposition at present.

How is the demand and supply of gold and silver to fix the purchasing power of given quantities of them? Bimetallism must be created by law, and the ratio between gold and silver—that is, the given amounts of them above spoken of—must also be fixed by law; therefore, under this proposition the law can and will fix the purchasing power of money. But the law never can, and never will, be able to do that.

How the demand and supply of gold and silver are to out-influence the commodity supply and demand any more than the demand and supply of one of those metals would is not apparent, nor is it explained. The bimetallist says that the effect of the demand and supply of gold and silver out-influences the effect of the demand and supply of commodities.

How? Why, by fixing the purchasing power of given quantities of gold and silver, and the result is a fixity of general prices. Establish a legal ratio between gold and silver, and all is accomplished. If the demand and supply of gold and silver will fix the purchasing power of them, why will not the demand and supply of either metal now do the same? The value of each depends upon its own supply and demand in any event, under bimetallism or not. How can fixing a ratio by law between gold and silver aid gold or silver, or both together, or the demand and supply of them, in overcoming the effects of a change in prices caused by changes in the demand and supply of commodities? It simply cannot do it, and never did do it, under bimetallism. Must not the price of each commodity be subject to the influence of its own conditions of supply and demand? The purchasing power of one commodity —gold or silver—or of both, cannot relieve each of all other commodities from this subjection to its own conditions of supply and demand.

§ 8. We have spent a great deal of time and space on this question, and have not yet discovered the bimetallist's real complaint. But the trouble is not with us, because we were bound in fairness to go over the whole of the bimetallist's argument, and were also compelled to do so for the purpose of clearing the case of immaterial matter. The trouble is that the bimetallist does not say just what he means.

When he complains about the appreciation of gold, his real complaint is that gold has not depreciated.

What he means is, that the demand and supply of the precious metals should, at all times and in all cases, correspond with the demand and supply of commodities; that is to say, if, by reason of an increase in the supply, or of a decrease in the cost of production, commodity has a tendency or an inclination to fall in price, the supply of the precious metal must also increase correspondingly and depreciate the purchasing power of the metal to the same extent as the depreciation of the value of commodity; and if commodity, on account of a decrease of supply, tends to rise in price, then either the demand for gold must increase or the supply of gold must forthwith be diminished, so that gold will appreciate sufficiently to prevent the rise in the price of the commodity, in order that at all times prices will remain steadily fixed and stationary, no rise and no fall from any cause. This is what the bimetallist means when he speaks of having the value of money "persistently the same"; of the fact of the value of money remaining *fixed* being its vice; and when he says that it was not necessary that general prices should fall because there was an increase in the supply of commodity and a lessened cost of production; that the very fact that there is a change in prices is proof that the money system is imperfect; and of the demand of gold and silver overwhelmingly out-influencing the demand and supply of commodities and thus securing a fixity of general prices.

This, then, is the bimetallist's Honest Dollar: one whose metal will always rise or fall in its purchasing power in order that it will at all times overcome all

the effects of an increased demand or supply of commodity, the lessened cost of production, competition, and the expansion and contraction of credit; and hold prices fixed and immovable, so that neither demand nor supply, neither an increase nor a decrease in the cost of production, neither monopoly nor competition, neither the expansion nor the contraction of credit will have any effect whatever on prices; for any tendency to such change in price will immeditaely be met and counteracted by a rise or fall of the purchasing power of this honest dollar, which will hold prices everlastingly and eternally the same. With this honest dollar nothing can make any difference on prices,—bountiful harvests, or famines, wars, and pestilence, plenty or scarcity,—none of these, nor anything else, can make any change in prices. Man may suffer, and may even die for want of the necessaries of life, or he may be crushed and smothered by the superfluous mass of commodities heaped upon him, and for which he has no use, yet he will have the satisfaction of knowing that prices cannot change. Everything on the dead level, no competition, no struggle for business, no speculation, no effort to improve the usefulness or the beauty of a commodity, for the price would be all the same; there would be no strikes, for what would be the use in striking for higher wages? prices and wages would be all the same; no financial storms of any kind, but at all times a lovely calm pervading the world, and peace and plenty, happiness and contentment reigning supreme.

It is possible that man, after having attained this

exalted state of perfection, will be happy, very happy, but he will be dead.

But of all claims that have been made, the one that bimetallism is the system which will produce this honest dollar and maintain the fixity of general prices is the most singular. Up to 1873 the world was practically bimetallic, and yet they continually had falls and rises in prices. From 1809 to 1850 there was a tremendous fall in prices, and the world was then bimetallic; there was a fall in prices after 1857, and after 1866, and during all this time the world was bimetallic. Mr. Andrews himself admits it, for, as above quoted, he says:

"In a word, vexations in kind entirely like those which rising and falling prices have been occasioning in our day, have dogged men ever since money was invented. . . . Is this plague necessary? Must it be perpetual? Is the commercial world, the entire money-using world, to be forever tormented with this accursed up and down in the purchasing power of money?"

No reason has been shown why the effect of bimetallism would not be the same in the future as it was in the past. As it was in the past so it would be in the future if again introduced, and this, too, is admitted by President Andrews. On page 61 he says: "That many manufactured articles have long been decreasing in intrinsic cost, is a great blessing, and articles of this class would doubtless have gone down more or less under an ideal system of money."

What, then, is the object of this persistent and furious attack upon gold and the present monetary

system, charging them with being the cause of falling prices and of all the alleged evils flowing therefrom, when, confessedly, the same changes in prices and the same evils have heretofore taken place, and will hereafter take place, under a bimetallic or ideal monetary system ? I will permit the bimetallists to answer this question. But, whatever may have been the object, there can be no doubt that it has had the effect of creating in the minds of a very great portion of the people the false impression and the belief that gold and the present monetary system have been the cause of the falling prices and of the whole train of evils, real or imaginary (and magnified to the highest degree), which are claimed to be the consequences of these falling prices, and that these falling prices and evils would not have occurred under a bimetallic system.

§ 9. One word more before closing this already too lengthy chapter. It is a word of caution to the reader not to permit himself to be too greatly influenced by the statistics and index numbers of prices. These statements are compiled from the prices of but a few out of the mass of commodities; indeed, from but a small proportion of all of the commodities, and hence do not show, and do not pretend to show, the prices of all, or even of any considerable proportion, of the commodities; therefore these statements do not show whether general prices have either fallen or risen. The allegation of a general fall of prices is nothing more than an inference drawn from these statements or tables of prices, which, as Dr. Soetbeer says: " can be taken and should be

taken only as approximate estimates, to be accepted with every qualification"; and as Mr. Sauerbeck is quoted by Mr. Pierson in the British *Economic Journal* for September, 1895, as saying: "such calculations as his will never give more than 'a rough' idea of the real cause of prices." "They cannot comprise everything, and it was never asserted by myself that the appreciation of gold was exactly in the same proportion." In none of these statements is real estate included, and one would naturally suppose that its prices would be given, for it, certainly, is one of the most important things.

Another thing, the reader is cautioned not to place too much reliance upon the assumption and assertion by some that prices have fallen. While the bimetallist insists that general prices have fallen, another class of authors of at least equal reliability and reputation, while admitting that some articles have fallen in price, yet insist that others have not, and that there has been no general fall of prices, and they back up their opinion by plenty of statistics.

There is, therefore, a great difference of opinion on the question, and it can by no means be regarded as settled. Cernuschi, the Father of Bimetallism, in his work entitled *The Bimetallic Par* (1887), pp. 33, 34, says:

"If the depression of trade had been caused by a monetary contraction, all prices in general would have been affected as much or nearly as much as the prices of articles of Asiatic origin and of the same articles produced in Europe.

"But by no means have all prices fallen. Ask heads

of families. They will reply that tea and bread are cheap, but that other articles of consumption are still at the old prices, and that several have even risen. Butcher's meat, fish, cheese, butter, beer, spirits, have not fallen. . . .

"When the scale of prices undergoes a change owing to a change in the volume of the existing monetary mass, the phenomenon is general, visible, and tangible for all. The maintenance of families required a larger quantity of money than before, after the volume of the existing mass was sensibly augmented by the addition of the new gold from California and Australia. Everybody acknowledged it, for everybody perceived it. But nobody perceives that of late years the maintenance of families has required less money than prior to 1873."

CHAPTER VIII

WHY THE COMMODITY USED AS MONEY MUST HAVE EXCHANGEABLE VALUE

§ 1. MORE people than wild and blind enthusiasts have, at one time or another, advocated the use of a money which has, of and in itself, no exchangeable value, but which depends wholly upon the mandate of government for its value in exchange; in other words, what is now known as *fiat* money; or have entertained and fostered notions and theories which, if carried out to their legitimate conclusion, would justify a belief in the entire practicability of such money.

Defining a precious metal when used as money as a mere sign, or ticket, or order, or bill, entitling the holder to a certain quantity of goods, is more than likely to convey the idea that money need not be a thing of value, but any sign or ticket will answer the same purpose. The impression left upon the mind by such a definition is, that money is something like a baggage check, or a ticket for some theatrical performance and the like. The check and the ticket of themselves have no value, or comparatively none, but they are a sign—that is, they are the evidence of the right to receive a certain piece of baggage, or to see a certain performance;

and defining money as a mere sign or ticket, etc., is more than likely to lead the mind to the conclusion that, since money is a mere sign or ticket showing that the holder is entitled to certain goods, it is not necessary that this mere sign or ticket or this evidence should be made out of any valuable material, and that brass and paper, or tin, or wood, or leather, or any other very cheap commodity would answer the purpose just as well as gold or silver.

Plutarch, speaking of Lycurgus of Sparta, says:

"He commanded that all gold and silver coin should be called in, and that only a sort of money made of iron should be current, a great weight and quantity of which was very little worth; so that to lay up twenty or thirty pounds there was required a pretty large closet, and, to remove it, nothing less than a yoke of oxen. With the diffusion of this money, at once a number of vices were banished from Lacedæmon; for who would rob another of such a coin? Who would unjustly detain or take by force, or accept as a bribe, a thing which it was not easy to hide, nor a credit to have, nor indeed of any use to cut in pieces? For when it was just red hot, they quenched it in vinegar, and by that means spoilt it, and made it almost incapable of being worked."

The object of Lycurgus in using the spoilt iron as money was to crush out all foreign and domestic trade, and he succeeded. Plutarch quaintly says:

"So there was now no more means of purchasing foreign goods and small wares; merchants sent no shiploads into Laconian ports; no rhetoric-master, no itinerant fortune-teller no harlot-monger, or gold or silversmith,

engraver, or jeweler, set foot in a country which had no money."

All of which goes to show that the ancients had a more correct understanding of money and of the necessity of its being a thing of value than many persons of modern times have. When the ancients wished to destroy the usefulness of money and to abolish its use, they knew just how to do it, and they did it by simply making money out of a thing which had no value.

The following extracts from the writings of Ricardo will show the doctrines taught by him on this subject. The quotations are taken from the works of Ricardo edited by McCulloch; the pages given are the pages in the *Works*.

"While the State coins money and charges no seignorage, money will be of the same value as any other piece of the same metal of the equal weight and fineness; but if the State charges a seignorage for coinage, the coined piece of money will generally exceed the value of the uncoined piece of metal by the whole seignorage charged, because it will require a greater quantity of labor, or, which is the same thing, the value of the produce of a greater quantity of labor, to procure it.

"While the State alone coins, there can be no limit to this charge of seignorage; for by limiting the quantity of coin, it can be raised to any conceivable value.

"It is on this principle that paper money circulates: the whole charge for paper money may be considered as seignorage. Though it has no intrinsic value, yet by limiting its quantity, its value in exchange is as great as an equal denomination of coin, or of bullion in that

coin. On the same principle, too, namely, by a limitation of its quantity, a debased coin would circulate at the value it should bear, if it were of the legal weight and fineness, and not at the value of the quantity of metal which it actually contained. In the history of the British coinage, we find, accordingly, that the currency was never depreciated in the same proportion that it was debased; the reason of which was, that it never was increased in quantity in proportion to its diminished intrinsic value."

"On these principles, it will be seen that it is not necessary that paper money should be payable in specie to secure its value; it is only necessary that its quantity should be regulated according to the value of the metal which is declared to be the standard." [1]

And again he says:

"The limits, beyond which a seignorage cannot be advantageously extended, are the actual expenses incurred by the manufacturing of bullion into coin. If a seignorage exceed these expenses, an advantage will accrue to false coiners by imitating the coins, although they should actually make them of their legal weight and standard; but even in this case, as the addition of money to the circulation beyond the regular demands of commerce will diminish the value of that money, the trade of false coiners must cease when the value of the coin does not exceed the value of bullion more than the actual expenses of fabrication. If the public could be secured from such illegal additions to the circulating medium, there could be no seignorage so high which a government might not advantageously exact; as the coined money would, in

[1] Essay on Currency and Banks, pp. 213, 214.

the same degree, exceed the value of bullion. If the seignorage amounted to ten per cent., bullion would necessarily be ten per cent. under the mint price; and if it were fifty per cent., that also would the value of coin exceed the value of bullion. It appears, then, that although a given weight of bullion can never exceed in value a given weight of coin, a given weight of coin may exceed in value a given weight of bullion by the whole expense of seignorage, however great that seignorage may be, provided that there was effectual security against the increase of money through the imitation of the coins by illegal means. And it appears also, that if no such security could be given, the trade of the false coiner would cease as soon as he had added so much to the amount of the coin as to diminish its value on a comparison with bullion to the actual expenses incurred. That these principles are correct may be proved from the consideration of the circumstances which give value to a bank note. A bank note is of no more intrinsic value than the piece of paper on which it is made. It may be considered as a piece of money on which the seignorage is enormous, amounting to all its value; yet if the public is sufficiently protected against the too great increase of such notes, either by the indiscretion of the issuers, or by the practices of false coiners or forgers, they must, in the ordinary operations of trade, retain their value.

"Whilst such money is kept within certain limits, any value may be given to it as currency; £3 17*s.* 10½*d.* may be worth an ounce of gold bullion, the value at which it was originaly issued, or it may be reduced to the value of half an ounce; and if the bank which issued had the exclusive privilege of procuring money to be coined at the mint, £3. 17*s.* 10½*d.* of their notes might be rendered

of equal value to 1, 2, 3, or any number of ounces of gold bullion. . . .

"From these principles it results that there can exist no depreciation of money but from excess. However debased a coinage may become, it will preserve its mint value; that is to say, it will pass in circulation for the intrinsic value of the bullion which it ought to contain, provided it be not in too great abundance."[1]

From which it appears that the quantity of gold or silver in the coin may be reduced to any extent: ten, fifty, or even ninety-nine per cent., either by a charge for seignorage or other form of raising the coins by the government, or by clipping, sweating, or any other of the ways by which coins are debased; and still the coin will pass in circulation for the intrinsic value of the bullion it ought to contain, provided the money be not in too great abundance; and that a bank note, if not issued in excess, and the coinage of gold and silver were limited or prevented, might be rendered worth any quantity of bullion—that is to say, an ounce of gold is worth in our money about $18.95, if the amount of bank notes were limited, and if the coinage of gold and silver were limited or stopped altogether, $18.95 in bank notes might purchase one, two, three, four, or any number of ounces of gold bullion.

Money, then, although it be of little or no exchangeable value in and of itself will, in circulation, be of equal value with full gold money of the standard weight and fineness if it be not in too great

[1] Reply to Mr. Bosanquet, *Works*, pp. 345–347.

abundance. It becomes, then, of importance to ascertain what is too great abundance or excess of money, and, unfortunately, Mr. Ricardo's account is so confusing that it is impossible to determine what excess is. We will see what Mr. Ricardo has to say about it.

"The whole paper money of every kind which can easily circulate in any country can never exceed the value of the gold and silver of which it supplies the place, or which (the commerce being supposed the same) would circulate there if there were no paper money."

"I do most unequivocally admit, that whilst the high price of bullion and the low exchanges continue, and whilst our gold is undebased, it would to me be no proof of our currency not being depreciated if there were only five millions of bank notes in circulation. When we speak, therefore, of an excess of bank notes, we mean that portion of the amount of the issues of the bank which can now circulate, but could not, if the currency were of its bullion value." [1]

"The quantity of money that can be employed in a country must depend on its value: . . ."

"A circulation can never be so abundant as to overflow; for, by diminishing its value, in the same proportion you will increase its quantity, and by increasing its value, diminish its quantity." [2]

"The circulation can never be over-full. If it be one of gold and silver, any increase in its quantity will be spread over the world. If it be one of paper, it will diffuse itself only in the country where it is issued." [3]

[1] Reply to Mr. Bosanquet, *Works*, pp. 344, 349, 350.

[2] Currency and Banks, *Works*, p. 213.

[3] High Price of Bullion, *Works*, p. 285.

"The plea that no more is issued than the wants of commerce require is of no weight; because the sum required for such purpose cannot be defined. Commerce is insatiable in its demands, and the same portion of it may employ ten millions or one hundred millions of circulating medium; the quantity depends wholly on its value. If the mines had been ten times more productive, ten times more money would the same commerce employ." [1]

Although it may appear, at first glance, from the above quotations that as to paper money no more can circulate than the amount of gold and silver which would have circulated, yet this is no limitation at all, because the circulation of gold and silver can never be so abundant as to overflow. It can never be over-full, and the sum required by commerce cannot be defined, and commerce is insatiable. All of which means that there is no such thing as excess or too great abundance of currency.

Small cause, then, for wonder that so many persons still cling to the *fiat*-money theory, when so distinguished a financial writer as Ricardo proclaimed the doctrine that no matter how debased a coinage may become, no matter to what a small percentage the metal in the coin may be reduced, still this debased coin will pass in the currency for just as much as coin of the standard weight and fineness; and that it is not necessary that paper money should be payable in specie in order to secure its value.

But this doctrine is not true. True enough, de-

[1] Reply to Mr. Bosanquet, etc., *Works*, p. 341.

based coin will for a short time remain in circulation without its baneful influence being felt, but it will not remain so in circulation for a sufficient length of time to justify the deduction that it is a principle of money that the debased money is just as useful and is worth just as much in the currency—that is, for use as money, as full standard coin is.

This doctrine is completely disproved by all history and experience.

Hallam, in *The Middle Ages*, vol. iii., part 2, chap. ix., says:

"Under Henry VI. the coin had lost one third of its weight in silver, which caused a proportional increase of money prices." To which he adds the following note:

"I have sometimes been surprised at the facility with which prices adjusted themselves to the quantity of silver contained in the current coin, in ages which appear too ignorant and too little commercial for the application of this mercantile principle. But the extensive dealings of the Jewish and Lombard usurers, who had many debtors in almost all parts of the country, would of itself introduce a knowledge, that silver, not its stamp, was the measure of value. I have mentioned in another place the heavy discontents excited by this debasement of the coin in France. . . . Wykes, an annalist of Edward I.'s age, tells us, that the Jews clipped our coin, till it retained hardly half its due weight, the effect of which was a general enhancement of prices, and decline of foreign trade."

Macaulay, in his famous twenty-first chapter,

which has been quoted so often, but which is so truthful and so forceful that it will bear any number of repetitions with profit to the reader, speaking of the time of the reign of King William the Third and the great recoinage of 1696, says:

"The silver coin, which was then the standard coin of the realm, was in a state at which the boldest and most enlightened statesmen stood aghast. . . .

"The horse in the Tower still paced his rounds. Fresh wagon-loads of choice money still came forth from the mill; and still they vanished as fast as they appeared. Great masses were melted down; great masses exported; great masses hoarded; but scarcely one new piece was to be found in the till of a shop, or in the leathern bag which the farmer carried home after the cattle-fair. . . . Meanwhile the shears of the clippers were constantly at work. The coiners, too, multiplied and prospered; for the worse the current money became, the more easily it was imitated. During many years this evil went on increasing. At first it was disregarded; but it at length became an insupportable curse to the country. . . .

"The evil proceeded with constantly accelerating velocity. At length in the autumn of 1695, it could hardly be said that the country possessed, for practical purposes, any measure of the value of commodities. It was a mere chance whether what was called a shilling was really tenpence, sixpence, or a groat. . . . There were indeed some northern districts into which the clipped money had only begun to find its way. An honest Quaker, who lived in one of these districts, recorded, in the some notes which are still extant, the amazement with which, when he travelled southward, shopkeepers and innkeepers stared at the broad and

heavy half-crowns with which he paid his way. They asked whence he came, and where such money was to be found. The guinea which he purchased for twenty-two shillings at Lancaster bore a different value at every stage of his journey. When he reached London it was worth thirty shillings, and would have been worth more had not the government fixed that rate as the highest at which gold should be received in the payment of taxes."

"The evils produced by this state of the currency were not such as have generally been thought worthy to occupy a prominent place in history. Yet it may well be doubted whether all the misery which had been inflicted on the English nation in a quarter of a century by bad kings, bad ministers, bad parliaments, and bad judges, was equal to the misery caused in a single year by bad crowns and bad shillings. . . . The evil was felt daily and hourly in almost every place and by almost every class, in the dairy and on the threshing-floor, by the anvil and by the loom, on the billows of the ocean and in the depths of the mine. Nothing could be purchased without a dispute. Over every counter there was wrangling from morning to night. The workman and his employer had a quarrel as regularly as the Saturday came round. On a fair-day or a market-day the clamors, the reproaches, the taunts, the curses, were incessant; and it was well if no booth was overturned and no head broken. No merchant would contract to deliver goods without making some stipulation about the quality of the coin in which he was to be paid. Even men of business were often bewildered by the confusion into which all pecuniary transactions were thrown. The simple and the careless were pillaged without mercy by extortioners whose demands grew even more rapidly than the money shrank. The price of the necessaries of life,

of shoes, of ale, of oatmeal, rose fast. The laborer found that the bit of metal, which, when he received it, was called a shilling, would hardly, when he wanted to purchase a pot of beer or a loaf of rye bread, go as far as sixpence."

Shaw, in his work entitled *The History of Currency*, page 123, in speaking of the Tudor debasement of the currency, which was nothing more than raising the coins, or reducing the quantity of metal in the coin, says as follows:

"For the purpose of external or foreign trade, a debasement of currency is fatuous and pernicious. The coins are estimated at their content of pure metal, and the international exchange is so rated. The consequence is an apparent rise of foreign prices proportioned to the extent of the debasement. This at once unsettles internal or home-trade prices, and they rise to the same level, but with such inequality of motion as may happen to follow from friction, local ignorance, want of communication, or from the intricacies of trade. The inequality of exchange coinage rates which results from this is the bullionist's or the financier's opportunity, and swiftly and invisibly the good species—or any, bad or good, upon which any differential profit can be had—disappear from circulation. The consequence is that the rising prices which instituted the process are no longer accompanied by an expanding or increasing volume of currency, but on the contrary, with an enormous decrease in the total of acceptable or efficient currency. Hence come decay of trade, and ruin of town and country. This is no paper, *à priori* argument. It is the patent unmistakable statement of history and fact."

And again in speaking of the time of the reign of William the Third, pp. 222–225, he says:

"By the time of the accession of William III. the scarcity of silver had become so great as to cause a petition from divers working goldsmiths in and about the city of London to the House of Commons (9th April, 1690). It stated: 'That upon search at the customs they found that since last October entries had been made of 286,102 ounces of silver in bullion, and 89,949 *dollars and pieces of eight* for exportation by divers private persons, and they doubted not but it would appear that not only the East India Company, but also divers Jews and merchants, had of late bought up great quantities of silver to carry out of the kingdom, and had given 1½*d.* per ounce above the value, which had encouraged the melting down of much plate and milled monies; whereby for six months past, not only the petitioners in their trade, but the mint itself had been stopped from coining."

"In addition to this actual drain of coinage, the processes of culling, clipping, and counterfeiting, which had been going on through the reigns of Charles II. and James II., had resulted in an unexampled depreciation of so much of the coinage as remained. A large portion of the currency consisted of iron, brass, or copper-pieces plated, and such coins as were of good silver were worth scarcely one-half their current value."

"The process of stripping the country of currency was increased by the continual pouring out of money in aid of William's wars, and the loss in exchange on such large remittances made the evil only too apparent. . . . Guineas, which were equal in value to 21*s.* 6*d.* rose to thirty shillings; and they would have risen to a still higher

rate if the officers of the exchequer and the receivers of public revenue had not refused to receive them in payment at the increased value."

"The great recoinage scheme was only completely accomplished in 1699. . . . According to the accounts of the officers of the Mint, the new silver coin amounted in tale to £6,882,908 19*s.* 7*d.* The worn and clipped money called in was estimated roughly at £4,000,000, on which the loss was about £2,000,000; the whole charge and loss being stated at not less than £2,700,000."

The cost to the government to restore this coinage was £2,700,000.

The facts of history are simply crushing. They conclusively show that debased coin will not pass in circulation for the same, or as much, as it would if it were of full standard weight; that the scarcity of money will not enable the debased coin to pass for any more in the circulation than if there was no scarcity, for the facts show that during all the time of the debasement and of its evil effects, the quantity of currency was constantly decreasing; nor do the facts show that debased money will not depreciate in proportion to the debasement. Guineas which were worth 21*s.* 6*d.* in silver passed for thirty shillings, that is a depreciation of almost one-third. The report of the officers of the Mint shows that the loss on recoinage was something over one-third, which, of course, means that the debasement of the coin was something over one-third. The proportion of depreciation of the coin is near enough to exclude all inferences that it would have depreciated still

more if there had not been such a limited quantity of the coin. Besides, our historians tell us that the guinea would have risen still higher, had not the receivers of public revenue refused to receive them in payment at the increased value.

Ricardo himself admits the facts of history and the correctness of the conclusions here drawn from them.

In his same works he says:

"The public has sustained, at different times, very serious loss from the depreciation of the circulating medium, arising from the unlawful practice of clipping the coins.

"In proportion as they become debased, so the prices of every commodity for which they are exchangeable rise in nominal value, not excepting gold and silver bullion: accordingly we find, that before the recoinage in the reign of King William the Third, the silver currency had become so degraded, that an ounce of silver, which ought to be contained in sixty-two pence, sold for seventy-seven pence; and a guinea, which was valued at the mint at twenty shillings, passed in all contracts for thirty shillings. This evil was then remedied by the recoinage. Similar effects followed from the debasement of the gold currency, which were again corrected in 1774 by the same means."

"If one fifth were taken off from every guinea, the market price of gold bullion would rise one fifth above the Mint price. . . . If such debased coin were to continue to be called by the name of guineas, and if the value of gold bullion and all other commodities were rated in the debased coin, a guinea fresh from the Mint

would be said to be worth one pound five shillings, and that sum would be given for it by the illicit trader; but it would not be the value of the new guinea which had increased, but that of the debased guineas which had fallen." [1]

"If guineas were degraded by clipping to half their present value, every commodity as well as land would rise to double its present nominal value."

"The following observations of Dr. Smith on this subject are so important, that I cannot but recommend them to the serious attention of all thinking men.

"'The raising the denomination of the coin has been the most usual expedient by which a real public bankruptcy has been disguised under the appearance of a pretended payment. If a sixpence, for example, should, either by act of parliament or royal proclamation, be raised to the denomination of a shilling, and twenty sixpences to that of a pound sterling, the person, who, under the old denomination had borrowed twenty shillings, or near four ounces of silver, would, under the new, pay with twenty sixpences, or with something less than two ounces. A national debt of about one hundred and twenty millions, nearly the capital of the funded debt of Great Britain, might in this manner be paid with about sixty-four millions of our present money. It would indeed be a pretended payment only, and the creditors of the public would be defrauded of ten shillings in the pound of what was due to them. The calamity, too, would extend much further than to the creditors of the public, and those of every private person would suffer a proportionable loss; and this without any advantage, but in most cases with a great additional loss

[1] High Price of Bullion, *Works*, pp. 273, 278.

to the creditors of the public. . . . A pretended payment of this kind, therefore, instead of alleviating, aggravates in most cases the loss of the creditors of the public; and, without any advantage to the public, extends the calamity to a great number of other innocent people. It occasions a general and most pernicious subversion of the fortunes of private people, enriching in most cases the idle and profuse debtor at the expense of the industrious and frugal creditor, and transporting a great part of the national capital from the hands which are likely to increase and improve it, to those which are likely to dissipate and destroy it,' etc.

"These observations of Dr. Smith on a debased money are equally applicable to a depreciated paper currency. He has enumerated but a few of the disastrous consequences which attend the debasement of the circulating medium, but he has sufficiently warned us against trying such dangerous experiments." [1]

The story of the paper money issued in France—assignats and mandats—during the French Revolution, and of the paper money issued by our colonies, and of the Continental money issued during our revolution, has been told so often of late that it is in everybody's mouth, and people have grown tired reading and hearing about it. The story is only recalled here as an item of evidence to prove that it is necessary in order to secure the value of paper money that it be payable in specie, otherwise, like the French assignats and the Colonial and Continental monies, it depreciates, and depreciates more and more until it has no exchangeable value at all; until

[1] High Price of Bullion, *Works*, pp. 287–289.

a dealer will refuse to part with any article of goods, no matter how small in value, in exchange for any quantity of this money. The phrase "not worth a continental" became a synonym for absolute worthlessness, because the Continental money was absolutely worthless. Nor is it true that these moneys depreciated only because they were issued in excess. One instance within the recollection of most men will show that excess alone, as the word is used by Ricardo, will not cause depreciation except in cases where the issues are in excess of the ability, or supposed ability, of the issuer to pay the notes; then the paper becomes discredited. But this is nothing more than saying that the value of the notes depends upon the credit of the issuer and of the opinion of its ability to pay. So long as paper money is not issued in such quantities so that the amount outstanding is not beyond the supposed ability of the issuer to pay, then any amount of any so-called excess in currency will not depreciate the notes. During our late civil war when the greenbacks were first issued in 1862, $100,000,000 was first issued. This quantity of paper money was not as great as the quantity of gold which had been driven out of circulation just previously to the issue of the greenbacks, and yet the greenbacks depreciated as soon as they were issued, and they depreciated or appreciated all through the war with the failures or successes of the Union armies; the value of the greenback varied with the varying fortunes of the war. After the close of the war the greenbacks still remained depreciated, although the quantity of

them in circulation remained the same. But with the resumption of specie payments in 1879, by which the greenbacks were made payable in specie, the greenback reached par with gold, and was just as good in exchange as gold, although the amount of greenbacks in circulation had not been reduced to the extent of a single dollar.

The law can compel a man to accept payment of an existing indebtedness in depreciated money, but it cannot compel him to sell or part with his goods and property and accept in payment depreciated money at any value the government or anyone else may fix or declare. Hence we find from history that a result of a depreciation of the currency or money has always been that the owner of goods either demanded more—a greater price—for the goods, or else refused to part with his goods at all in exchange for the depreciated money. The reason, then, why the commodity used as money must have exchangeable value, is because people will not have and will not accept any other kind. A simple enough reason, but it is all-sufficient, and cuts off all debate on the whys and wherefores. It is the *fiat* of the commercial world, and that settles it. There is no appeal from this judgment; it will remain in force until the commercial world reverses this judgment, and by common consent agrees to, and does, accept mere signs, tokens, or any other valueless thing or ideals as money.

PART II

OF CREDIT AND THE CREDIT SYSTEM

CHAPTER I

GENERAL OBSERVATIONS

§ 1. THE word "credit," in commerce has several meanings. (1) It is that trust and confidence which one man reposes in another, and which induces the former to sell and deliver his goods to the latter upon an agreement by the latter of payment at some future day; the seller gives the purchaser "credit," and the purchaser receives the "credit," and it is the purchaser's credit which enables him to purchase goods under said conditions. (2) The claim which the seller of the goods has against the purchaser for the purchase money of the goods is a "credit" to him, whilst it is a debt or a debit against the purchaser. (3) The word "credit" is also used as a name for that system which should be called "the credit system," by means of which payment of indebtedness is made without the use of money. As a matter of fact, over ninety per cent. (many persons hold that it is at least ninety-seven per cent.) of all business is transacted, of all goods are purchased,

and of all payments are made, by means of credit, and without the use of a dollar of money. The credit system implies the other two forms of credit, but the other forms of credit do not imply the credit system.

§ 2. The influence of the first form of credit on prices has already been considered; it now remains to consider credit and the credit system as a means of payment. This system embraces all devices by which payments are properly made, without the use of money, except strict and direct barter. But this system is indirectly and really a system of barter, for by it goods and services pay for goods and services. By this system a man applies his credits to the payment of his debts. Simply stated, this system is one of set-off, by which men set off the debts which others owe them against those which they owe to others. Among the instruments of this system are Books of Accounts, Promissory Notes and Bills of Exchange, Deposits in Banks, Bank Checks and Banks, and Clearing-Houses.

§ 3. The general opinion seems to be that the credit system is a modern device; invented especially for the purpose of lessening the use of money, or making a less quantity of money sufficient for the purposes of commerce; or, in other words, as a substitute for money, and that the extent of credit depends upon the quantity of money in the country; but these views are all erroneous, and the slightest reflection will show them to be so. Business done on credit is borrowing, and is also a phase of barter. It is the obtaining of a sum of money or of particu-

lar goods in the present upon the promise or undertaking of the purchaser or the borrower to repay the money or to return either the same goods or their equivalent at some future time. It is but a phase of barter, and only differs from the examples of direct barter used by writers in this, that, instead of there being an immediate delivery of both of the different articles bartered or exchanged, there is only a present delivery on the one side, the delivery on the other side not being made until some time in the future. The hunter finds his stock of powder and lead exhausted, and cannot go the great distance to the trader where he can barter his furs for powder and lead, so he goes to his nearest neighbor and borrows a supply of powder and lead from him, with the understanding that he will return equal quantities of both at some future time after he has exchanged his furs for powder and lead. The herdsman finds that his stock of salt, for the use of his cattle, has been exhausted, and he goes to his neighbor and procures a supply with the understanding that he will return the same quantity at some future time. The owner of a colt of a certain breed of horses barters with the owner of a cow of a particular breed of cattle by which he transfers the colt to the owner of the cow, under the agreement that the latter will, at some future time, deliver to the former a calf from the cow; and so one can go around the whole range of human wants and desires. It thus appears that credit is but a species of barter, and in the very nature of things must have existed antecedent to the use of money. Surely we are not

expected to believe that human trust and confidence did not exist before the introduction of the use of money, and that trust and confidence are the result of the introduction of the use of money, and depend upon money, and that they are but a substitute for money. Credit and the credit system, then, existed before the introduction of the use of money, and it is not and cannot be dependent upon the quantity of money; nor are they mere substitutes for money; but they exist and operate wholly independent of money, and would continue to exist and operate just as successfully and extensively, and perhaps even more so, were there not one cent of money in existence; for, although prices and amounts are, under the credit system, expressed in terms of money, yet, if there were no money in existence, credit could get along just as well by the simple process of adopting a money of account in which to express prices and amounts. Money of account has already been explained in this work.

There is no essential difference between the form of original credit under the barter system and that of credit, in the present, under the money system. A borrows $1000 from B under an agreement that the same amount is to be returned at some future day; that is, A borrows 1000 pieces of gold of a certain weight and fineness from B, and A agrees to return the same number of pieces of gold of the same weight and fineness, or their equivalent, at some future day. Again, A transfers a colt to B, B agreeing to deliver to A in exchange therefor, at some future day, a given number of pieces of gold of a certain weight

and fineness. What is the difference between the ancient and modern forms of credit, except in the commodities used for borrowing or exchanging? The exception makes no difference at all.

As the general opinion that credit is a modern invention is a mistake; so, many are, also, mistaken in believing that some of the instruments of credit are entirely modern inventions; all of which will be developed as we go along. There is nothing particularly modern in the principles of credit, or of the credit system, although both have been expanded, developed, and improved to a most wonderful degree in modern times.

CHAPTER II

BOOKS OF ACCOUNT

§ 1. THE germ of the credit system is the ordinary book credit. When two persons have mutual dealings, instead of making payment at each transaction, they simply debit each other in account with the proper amount. The payment is deferred to a future day. Each receives and enjoys the benefit of the goods obtained from the other, and each is to make satisfaction at some future time. We will suppose A and B to be persons so dealing with each other; at the end of the year, or whenever the time of periodical settlement arrives, and it is then, upon casting up the accounts, found that B has received $700 worth of goods from A, and that A has received $600 worth from B, the accounts are so balanced, showing B indebted to A in the sum of $100. If this $100 be paid, then the whole indebtedness of $700 on the one side and $600 on the other side is paid. Whether the $100 be paid or not, $600 on each side of the account is extinguished and paid by the mutual set-off of the accounts against each other. The balance of $100 owing by B to A may not be paid at all, but carried over as a debit against B in the account for the next settlement, at which time A may be found to have received from B an amount

of goods sufficient to pay the $100 and all the goods B received from A in the meantime, and thus the whole amount of both accounts will be paid and discharged without the use of a dollar of money. The balance of $100 owing by B to A may be paid in other ways without the use of money; as, for instance, A and B may each have mutual dealings with C, and on settlement A is found to be indebted to C in the sum of $100 or over, and C is found to be indebted to B in that amount or more, B will then give A an order (which is in effect a bill of exchange) upon C, directing the latter to pay to A the sum of $100, and this order enables A to pay off so much of his indebtedness to C; or, though A and C have no mutual dealings, B can still pay the $100 due by him to A by an order on C, and C may pay it either in cash, or by delivering to A an order on D, who may be indebted to C, and so on. What two persons can do by keeping mutual accounts, three or any number of persons can do; each one will be willing to set off what is owing to him by any one or all of the others, against what is owing by him to one or all of the others. The whole indebtedness thus mutually incurred can be extinguished by the simple process of set-off, except the balance which may be found due to the one or the other. The importance of accounts and of bookkeeping in the credit system cannot be overestimated, and it is evident that it has not yet reached its full development. Theoretically all the debts contracted in trade may, in this way, be set off or paid, for the debits and the credits are equal, and, as a matter of course, will balance

each other. As explained in the preceding chapter, under the credit system a man discharges or pays his debts with his credits. If all the traders of a particular community kept their accounts in one set of books every man would be thus debited and credited, and only their balances would remain unpaid. This supposititious case is only mentioned in order to show that the agency of book accounts is still capable of a wider range of operations.

CHAPTER III

PROMISSORY NOTES AND BILLS OF EXCHANGE

§ 1. A PROMISSORY note is a promise in writing to pay a certain sum of money, and a bill of exchange is a direction in writing to another to pay a certain sum for the writer. They are a part of the credit system, and are the evidences of the debts created by business transactions. Their day of payment is appointed on their face. Their utility is not confined to merely postponing the day of payment and affording the debtor time to arrange for payment; they may perform an intermediate office. The seller of goods for $1000, who takes a bill or note for the amount from the purchaser, may realize the money at the maturity of the paper, or he may at once purchase goods to that amount, and transfer the bill or note in payment. By this means, through the agency of the paper, he exchanges goods to the amount of $1000 for goods to that amount; that is, the goods sold become payment for the goods bought, and the same note or bill may, in this manner, make any number of payments for the purchases of goods by the parties, respectively, negotiating them before it reaches maturity; and although, eventually, it may be paid in money, yet, meanwhile, it has accomplished payments to many

times its amount. But it is very rarely ever paid by money, but in the vast majority of cases it is paid by the credits of the maker or acceptor in a bank.

Promissory notes and bills of exchange are thus employed to purchase goods, which are again sold for other notes and bills, which are in turn used to purchase other goods; and the note or bill may pass through any number of hands, accomplishing a payment at each transfer. Almost the whole mass of goods in trade are bought and sold through the agency of promissory notes or bills of exchange, with the use of but little money, except for retail business.

The most general way in which the holder of a bill or note uses it, is to negotiate it with a bank, or banker, which is usually called discounting it, and the proceeds of the discount (which is really a sale of the note or bill) are credited to the holder in his deposit account with the bank or banker, and he draws his check on the account in payment of his debts. But this more properly belongs to the subject of the next chapter.

CHAPTER IV

DEPOSITS IN BANKS, BANK CHECKS, AND BANKS

§ 1. A BANK is a borrower and a lender of money, a dealer in commercial paper or securities, and a general agent for the collection of commercial paper or securities.

Although the person who puts money in a bank is called a depositor, yet the contractual relation between a bank and the depositor is not that of bailment, but of debtor and creditor. The depositor places the money in the bank, and thereupon the money becomes the property of the bank to dispose of as it sees fit; but the bank thereby becomes the debtor of the depositor to the amount so deposited, and its contract or liability is to either return a like amount of money in one or more payments to the depositor, or to other persons as the depositor may, by his check, or checks, drawn on the bank, direct. The bank thus becomes a borrower of money, usually without hire or interest, but sometimes it pays interest on the amounts deposited. A bank also loans money. A customer of the bank desiring to borrow money from the bank usually executes his note for the amount payable to the order of the bank, and which note is secured by satisfactory endorsements, or by collateral, or by both; the bank deducts the

interest in advance, which, in this case, it calls the discount, and either pays over the net balance to the borrower in cash, or credits him with the amount in his account; the bank thus becomes a lender of money.

A customer of the bank has received, in his business transactions, promissory notes or bills of exchange for goods sold by him; he takes these notes and bills to the bank and sells them to it; the transaction being called a discount, the bank deducts from the face of the bills a certain sum called discount, and gives the difference to the customer, either by crediting him with the proceeds in his account or by paying them over directly to him. In either case the real transaction is that the bank purchases the note or bill, for the price or consideration agreed upon. Again, the customer may have a payment to make at some distant point; in order to make this payment he purchases from his bank what is called a bank-draft, which is nothing more than a bill of exchange drawn by his bank on its correspondent, a bank in some other place, directing it to pay the amount of the payment. The bank thus becomes a dealer in commercial paper.

A customer of the bank sells a bill of goods and draws a bill of exchange on the purchaser for payment of the goods, or he sells the goods and takes from the purchaser his promissory note in payment. He then puts the bill or note in bank for collection, and the bank after collection either pays the customer the proceeds in cash or gives him credit for the amount in his account. The bank also in the same

way collects for its customers checks drawn on other banks, and also checks, notes, and bills forwarded to it by banks at a distance for collection. The bank thus becomes a general agent for the collection of commercial paper.

§ 2. As a bank is by far the most important and effective instrument of the whole credit system, a brief consideration of its methods of operation will serve to convey a clearer idea of the credit system than can be, perhaps, obtained in any other way.

A bank, or banker, starts out with a certain amount of capital. This capital constitutes the nucleus of a fund out of which the bank grants loans to, or purchases commercial paper from, its customers. Suppose that a bank starts out with $100,000 capital, and that $400,000 are deposited with the bank by its customers. The customers will not draw out this money immediately, and experience has shown that while some of the depositors may draw out the whole or a part of their deposits, others will deposit as much as has been drawn out, and thus the whole $500,000 constitutes a fund for loans or for the purchase or discount of commercial paper. The bank in this way concentrates within itself an immense credit fund, which is available for business transactions, and this fund is created and maintained almost wholly by credit, and with the use of but little actual money. If this fund were not so consolidated in the bank, very little of it would be available, in the hands of the individual depositor, as a credit fund for business purposes.

§ 3. While the amounts deposited in a bank by

the depositors form a fund for the loaning and discounting purposes of the bank, they, at the same time, constitute a fund for the payment of the debts owing by the depositors without the acutual use of money.

Take the case of a small community where there is but one bank. The business men of that community will deposit in the bank and do business through it. Each business man will daily, or whenever convenient, deposit with the bank all his cash, except mere pocket money; he will also deposit all checks, either on the same bank or on other banks at some other place, which he has received in the course of his business; the former for direct credit, and the latter for credit when collected to his account. He will also place in the bank his notes and bills which he holds against others for collection, and when collected he will receive credit in his account with the bank, or he may negotiate or discount the bills or notes to the bank and receive a credit in his account for the proceeds of the discount; or he may wish to borrow a sum of money from the bank, on his note or other commercial paper; upon making the loan he is credited with the amount or proceeds of the loan in his account with the bank. In all these cases of deposits of checks, either for collection or otherwise, the collection or discount of notes and bills, it is very seldom that the proceeds are paid over directly in cash to the customer. Usually, and in the vast majority of cases, he only receives credit for the respective amounts in his deposit account, and these deposits constitute the fund out of

which he pays his debts. The business man now no longer pays a bill for goods which he has purchased, or a balance found to be due by him in a settlement between him and his neighbor, with actual money, but he gives to his creditor his check on the bank for the amount, which check is nothing more than an order directed to the bank, ordering it to pay the sum mentioned in the check to the holder of the check out of his deposit fund in the bank. The person receiving the check, if he is in business in the same community, is also a customer of the bank; he deposits the check with the bank, receiving credit for the amount in his account, and the drawer of the check is charged in his account with the amount of the check; thus the debt is discharged by simply writing a charge for the amount in the account of the debtor, and by writing a credit in the account of the creditor in the books of the bank. There may be ten, twenty, fifty, a hundred, or more customers of the bank doing business in the same community; all the debits and credits of all these customers who have mutual dealings with each other will meet in the bank, and will there be discharged by writing a charge in one account, and by writing a credit in another account.

Loans and paper discounted are daily falling due and are paid by the checks of the debtors on their bank account. New loans and discounts and deposits are being made constantly, and while the account is being reduced by the payment of checks drawn upon it, it is being augmented by additional deposits and credits from the several sources above

mentioned. Business men who keep accounts in bank are, generally, creditor and debtor during the year to almost the whole extent of their business. They give their paper for the purchases they make, and they take the paper of others for the goods they have sold. The bank discounts for them the paper they have received, and collects from them the paper they have given to others. The bank then in effect keeps the books of account of its customers, in which they are credited with what is due them from others, and debited with what they owe to others. This deposit fund is of vast facility in enabling the business man to pay his debts without the use of money, and to set off his credits against his debits. The effect of the system is that all credits are converted into a fund for the discharge of debts, and credits are set off against debits.

§ 4. If we take a case where there are two banks in a community the process in each bank will be the same as in the case where there was but one bank. Some of the business men will keep their account in the one bank and some in the other, and some will keep accounts in both banks; but between the two banks all the mutual accounts between the customers of both banks, and all the debits and credits of all these customers will be settled in the same manner as if they all did business in one bank. A business man receives a check on the bank of which he is not a customer, he takes this check and deposits it in the bank in which he keeps his account. Every other business man will do the same; the consequence will be that each bank will hold checks to a certain

amount against the other. The two banks will then be in the position of two traders who have mutual accounts—each an account against the other. At most, only the balance due by one bank to the other, after deducting the amount held by the one bank against what is held by the other, will be paid in money; but it is not usual to even pay this balance with money, but it is carried over until the next day, when the balance may be on the other side of the account.

The same process takes place where there are more than two banks in a community; each bank settling in the manner indicated with each of the other banks, but where there is any considerable number of banks in a community the operation becomes very slow and burdensome, which difficulties led to the adoption of the Clearing-House, which will be the subject of the next chapter.

CHAPTER V

THE CLEARING-HOUSE

§ 1. THE earliest account of any transaction which, in theory, resembles the modern clearing-house, that has come under my observation, is Mahomet's account of the day of judgment for the faithful Mussulman.

"The doom of the infidels is common; the measure of their guilt and punishment is determined by the degree of evidence which they have rejected, by the magnitude of the errors which they have entertained: the eternal mansions of the Christians, the Jews, the Sabians, the Magians, and idolaters, are sunk below each other in the abyss; and the lowest hell is reserved for the faithless hypocrites who have assumed the mask of religion. After the greater part of mankind has been condemned for their opinions, the true believers only will be judged by their actions. The good and evil of each Mussulman will be accurately weighed in a real or allegorical balance; and a singular mode of compensation will be allowed for the payment of injuries: the aggressor will refund an equivalent of his own good actions, for the benefit of the person whom he has wronged; and if he should be destitute of any moral property, the weight of his sins will be loaded with an adequate share of the demerits of the sufferer. According as the shares of guilt

or virtue shall predominate, the sentence will be pronounced, and all, without distinction, will pass over the sharp and perilous bridge of the abyss; but the innocent, treading in the footsteps of Mahomet, will gloriously enter the gates of paradise, while the guilty will fall into the first and mildest of the seven hells. The term of expiation will vary from nine hundred to seven thousand years; but the prophet has judiciously promised, that *all* his disciples, whatever may be their sins, shall be saved, by their own faith and his intercession, from eternal damnation." [1]

Truly, a grand clearing and settlement on that Great Day, but wonderfully like settlements and adjustments made between man and man; so much so, that it suggests the thought that it was modelled after some method of settlement between men on this earth. The good is set off against the evil.

Mahomet was born and reared in Mecca, where were annually assembled the pilgrims of the Arabian world, for the purposes of devotion and commerce, and he probably then learned the methods of business and settlements between merchants. He made two journeys with his uncle and his caravan into Syria to the fairs at Bostra and Damascus. In all probability the method of settlement of accounts between the merchants attending these fairs was similar to that which we know was pursued at fairs at subsequent periods. Doubtless it was while attending these fairs that he imbibed the notions or theories of settlements, which he afterwards attri-

[1] See Gibbon's *Decline and Fall of the Roman Empire*, chap. L.

buted to the Almighty in his final settlement with man.

§ 2. The origin of fairs is of very great antiquity. We have seen that they were in existence in Asia during the time of Mahomet. During the thirteenth, fourteenth, and fifteenth centuries the greater part of the commerce of Europe was transacted at fairs.

Naturally merchants found that they could make settlements and payment of debts more conveniently then than at any other time. Bills of exchange were generally made payable at the fairs attended by the parties. Fairs were held at intervals of from three to twelve months, and payments to large amounts were effected at these affairs. We have historical accounts of the methods and process of payments pursued at the fairs held at Lyons, which will serve as an illustration of the system of payment pursued by merchants in the Middle Ages.

There were four fairs held in each year at Lyons. Kings, or Epiphany, began in January; Easter, in April; August, in that month; and All Saints in November. Four payments were, also, held: one at each fair. The Epiphany payments were held in all March; those of Easter all June; those of August all September; and those of All Saints all November. Engagements to great amounts, arising out of transactions not concluded at fairs, were made payable at these payments by bills of exchange, book accounts, or otherwise. Merchants who resorted to these fairs, opened an account in their books with each payment by name.

"This account exhibited the sums the accountant had promised to pay, and what sums others had agreed to pay him at each payment, and the names of the persons debtors and creditors. The balance of this account showed at once how much each merchant had to pay more than he was to receive, or to receive more than he was to pay, at each payment."

A proportion of the sales of merchandise made during the fair were payable at the payments held with the fair. Merchants who had made up their accounts previous to their coming to the fair continued their entries in the same account for transactions payable at the payments held with or after the fair until it closed.

A party concerned could attend the payments in person, or could be represented by an agent duly authorized, who could present the duly authenticated accounts of his principal.

Every payment was opened with ceremony. The Provost Marchand came to the exchange with his Register and six Syndics,—two French, two Italians, and two Swiss or Germans. The first five days were devoted chiefly to the presentation and acceptance of such bills as were not previously accepted. After the fifth day no more bills could be accepted; and before the meeting on the sixth day all the accounts for the payment must be definitely written out and closed. These accounts were termed *Bilans*, being sheets carefully bound or fastened together. A balance once made up and submitted could not be altered; every accountant being held responsible for

the correctness of his entries. Those whose business did not admit their being the bearers of *Bilans* were permitted to send in their debits and credits by any merchant who would become responsible, by adding them to his own. On the sixth day the bearers of these statements, or *Bilans*, assembled. The usual mode of adjustment was for the debtor to address himself to his creditor and his debtor, and procuring the assumption by his debtor of the debt which he owed to the creditor, which assumption being accepted by the creditor operated as a settlement and discharge between the debtor and creditor first named. A owes B $1000 and B owes C $1500; B asks A to assume $1000 of his debt to C; the latter accepts the assumption, and $1000 is thus paid. By comparing books it is ascertained that D owes a large sum to E, the latter a like sum to F, the latter a like sum to G, the latter a like sum to H; and all being met, it is agreed that these sums shall be acquited by a payment from D directly to H. These transfers or set-offs were entered upon the book of each of the parties concerned, so that the books showed the exact progress of the adjustment. So long as anyone who owed anything had any amount coming to him, he could apply it on his debt, and the adjustment would only cease when the debtors present had no further credits which they could apply to the further reduction of their indebtedness. After which nothing more remained to be done than for those indebted to pay the balances of their several accounts to whomsoever they might have become indebted in the many assumptions which

had occurred. The result would show that each person would have to pay in, at last, the precise sum which his statement showed, at first, he was in debt more than what was coming to him, and each one having a balance due him would receive, after all his debts were paid, the sum which his statement, at first, showed was coming to him more than he owed. By perseverance and comparison of books, a complete discharge of all mutual indebtedness would be effected, and the payment of the balances would discharge the whole.

In many of its features the payment at these fairs was similar to the process of clearing through the modern clearing-house. While the latter is greatly improved and the process of payment is vastly facilitated, yet the underlying principle of both systems is the same—that of a debtor applying or setting off his credits against his debts. In fact, the modern clearing-house is nothing more than the application of ancient methods to new conditions.

It is but just to state that the foregoing account of the methods of payment pursued at the fairs held at Lyons is taken from a work by Stephen Colwell, entitled *Ways and Means of Payment*, page 275, etc.

§ 3. Mr. Horace White, in his work entitled *Money and Banking*, page 239, etc., gives the following account of the transaction of business at the New York Clearing-House, which may be taken as a type of the others:

"There are sixty-seven members of the New York Clearing House, one of them being the Assistant-Treas-

urer of the United States, and each member has a number, as Bank A., No. 1, etc. There are also thirty-four banks and eleven trust companies in New York, nineteen banks and seven trust companies in Brooklyn, and nine banks in Jersey City, Hoboken and Staten Island, not members of the clearing house, that clear through other banks. The Union Trust Co., for example, makes an arrangement with the Bank of Commerce, by which all checks drawn on the former may be presented at the clearing house to the settling clerk of the latter, and be treated by the latter exactly like checks drawn on itself. In this case the Bank of Commerce is responsible to its fellow-members of the clearing house for checks drawn on the Union Trust Co. in the same way as for its own checks. Accordingly it may happen that any bank may go to the clearing house with checks and drafts drawn on one hundred and forty six different institutions, which it has received the previous day from its depositors, or through the mail from its correspondents elsewhere"

(or which it has received from other banks and Trust Companies for clearing).

"In order to expedite the work, it must separate these checks into not more than sixty six packages, one for each member of the clearing house upon which it holds any, and prepare a schedule, on a sheet of paper, showing the amount of its claim on each bank. It must also have a ticket for delivery to each, showing for example, that Bank A. has a total claim on Bank B. for so much money. It must also come to the clearing house with a statement showing the aggregate of all its claims on all the banks. This is its claim against the clearing house

for that day. It is handed to the manager of the clearing house, or to the proof clerk, immediately upon entering. All these things must be done before the operation of clearing begins.

"Each bank sends two clerks to the clearing house —a delivery clerk and a settling clerk. There are three rows of seats running through the clearing room lengthwise, one in the centre as shown in the illustration,[1] and one on each side parallel with it. The settling clerks occupy these seats. . . . The delivery clerks, with their packages of checks in separate envelopes, stand in the open space in front of the settling clerks." . . . "The movement has all the precision of a military drill. When the second bell sounds, at exactly 10 o'clock, each delivery clerk takes one step forward, hands the proper package to the settling clerk of the bank next to him, drops the accompanying ticket, showing the amount, into an aperture like a letter box and places before this settling clerk his schedule on which the latter places his initials. This is an acknowledgment of the receipt of the package, but not of any particular sum. Thus the procession moves uninterruptedly until each delivery clerk has presented to each settling clerk the proper package and ticket. Usually this part of the operation is completed in ten minutes. Meanwhile the proof clerk, who occupies a desk near the manager, has entered the claims of each bank under the head 'Banks Cr.,' on a broad sheet of paper shown below.

"Inasmuch as the amount of each bank's claim against the clearing house (entered under the head 'Banks Cr.') is the sum of all the tickets which its delivery clerk has pushed into the letter boxes of the other banks, it

[1] The illustration referred to, and given by Mr. White, is omitted here.

follows that all the tickets of all the banks should equal all the entries under that head. The next step in the operation is for each settling clerk to arrange the amounts of all the tickets in his letter box in a column, add it up and send the amount to the proof clerk which he transcribes and arranges according to the bank's number under the head 'Banks Dr.,' so that the debit of Bank A. shall be on the same line with its credit. Then the difference between the two will show how much the bank owes the clearing house, or how much the clearing house owes the bank. . . . When all are completed, if no error has been made, the footings of the credit and debit columns must be exactly equal, and the footings of the two other columns, which show the differences, must be exactly equal. Then these differences are read off slowly and in a distinct tone of voice by the manager so that each settling clerk can write down the sum that his bank has to pay or to receive. . . ."

"When the footings have been made, the proof sheet is in the following form:

Banks.	*Due Clearing House.*	*Banks Dr.*	*Banks Cr.*	*Due Banks.*
A. . .	$ 1,260.81	$ 10,521.21	$ 9,260.40	
B. . .		55,662.16	71,850.39	$16,188.23
C. . .		41,922.90	49,621.86	7,698.96
D. . .	9,651.85	61,330.33	51,678.48	
E. . .	3,566.60	56,397.00	52,830.40	
F. . .		74,719.60	79,781.31	5,061.71
G. . .	5,073.14	53,211.34	48,138.20	
X. . .	9,396.50	60,059.11	50,662.61	
	$28,948.90	$413,823.65	$413,823.65	$28,948.90

"The actual amounts are much larger than here represented. . . . The amount of the balances, *i. e.*, of the sum to be paid into and out of the clearing house is

usually about five per cent. of the total amount of checks passed through it. . . . The debtor banks must pay what they owe to the clearing house before 1.30 P.M., after which the clearing house pays the same money to the creditor banks."

Thus by the operations of the various clearing-houses many millions of indebtedness are paid and discharged every day by the payment of not more, on an average, than five per cent. of the whole indebtedness in cash or money.

The effect of the operations through the clearing-house is not only that each bank uses its credits against all the other banks to pay what it owes to all the other banks—that is, it is thereby enabled to set off all the claims it holds against all the other banks against the claims which all the other banks hold against it—but also that all the customers of all the banks who have mutual dealings are enabled to set off their mutual claims against each other, in the same manner as if all the customers of all the banks kept their accounts with one bank where all the debits and credits would appear on the same book, and the clearing—that is, the various set-offs—would appear upon that book by the debits and credits entered in each customer's account.

PART III

SOME GENERAL TOPICS

CHAPTER I

BIMETALLISM

§ 1. At present two forms of bimetallism are advocated:

(1) National Bimetallism;

(2) International Bimetallism.

The national bimetallist demands the free and unlimited coinage of both silver and gold by the United States of America, at the present ratio of 16 to 1, without waiting for the aid or consent of any other nation, and that the standard silver dollar shall be a full legal tender, equally with gold, for all debts, public and private.

The international bimetallist favors a treaty among several of the principal commercial nations of the world (number of nations to join in the treaty not fixed but left indefinite), providing for the unlimited coinage, by all the nations comprising the league, of both silver and gold at a ratio to be agreed upon, and that both silver and gold shall be unlimited legal tender.

It will be observed that the main principles and conditions of both forms of bimetallism are the same. They only differ upon two points, which, however important they may be in their practical effects, do not, materially, affect the principles of bimetallism. The first point of difference is that the national bimetallist demands that the United States of America go it alone, while the international says we can only do it in conjunction with some other nations, but does not commit himself upon the number of nations necessary to join in the treaty. The other point of difference is the ratio. The national bimetallist insists on the present ratio of 16 to 1, while the international commits himself to no ratio, but proposes to leave that for future agreement. Outside of these two points, the two systems make the same demands, and depend upon the same principles and arguments. They both urge the same reasons for support, and both claim the same resulting benefits to follow the introduction of the system.

§ 2. It is proposed to first consider the principles and claims common to both systems—National Bimetallism and International Bimetallism.

There are three conditions which are absolutely and essentially requisite to create and maintain bimetallism. They are as follows:

(*a*) The unlimited coinage of both silver and gold.

(*b*) The fixing of a ratio between silver and gold, as, for instance, 16 to 1.

(*c*) The making of both silver and gold unlimited legal tender.

No two of these conditions would accomplish bimetallism, in the sense in which that term is now used.

Unlimited coinage and a fixed ratio would not accomplish it, because although there might be no limit to the coinage, and the ratio might be fixed between the two metals, still, the two metals might not pass concurrently, for the reason that creditors might refuse to accept either one or the other in payment, and the owner of commodities might refuse to sell his commodities in exchange for either one or the other of the metals.

Unlimited coinage of, and making, both metals a legal tender, will not effect bimetallism, because, although the coinage is unlimited and both metals are a legal tender in payment of a debt, yet each metal would then only pass in circulation at its market or exchangeable value, and a gold dollar might be worth more, and might purchase more than a silver dollar would—that is, the purchasing power of a gold dollar might be greater than that of a silver dollar.

The fixing of a ratio between the two metals and making both a legal tender will not accomplish bimetallism, for with the limited coinage of one of the metals, the value of the coin made out of the metal, the coinage of which is limited, will be different from the value of the metal itself. It will have an exchangeable value according to the legal ratio, but this exchangeable value does not wholly depend upon the value of the metal contained in the coin, but upon some extrinsic element; and it is not in-

fluenced by changes in the value of the metal itself.

It becomes, then, important to consider what part each of these conditions takes in the play.

(*a*) Unlimited coinage of the metal is intended to bring in the whole supply of the metal, as possible and available supply for money, and it makes the value of the coined and the uncoined metal the same; for instance, if we had unlimited coinage of silver, without more, the silver dollars would be worth no more than what the quantity of silver in them would be worth at its market value. Now, as has already been explained,—our silver dollars are kept on a par with the gold dollar, not on account of the value of the silver contained in the dollar, but on account of the promise of the Government to keep them at par with gold, and hence to redeem them with gold. With unlimited coinage of silver no government could afford to guarantee parity between gold and silver, therefore the effect of free coinage alone would be to make a silver dollar worth just as much as the silver contained in it is worth in the market. The bimetallist, while he is compelled to insist upon the unlimited coinage of silver in order to bring in the whole stock or supply of silver as possible money supply, yet, he is, by force of circumstances, compelled to another step in order to avoid the natural consequence of bringing the whole of the stock of silver in as possible money supply, to wit: that the value of the money would be governed entirely by the market price of the metal, and subject to all the fluctuations of the market. He, therefore,

insists upon establishing a ratio between the two metals by law.

(*b*) The object of fixing a ratio between silver and gold has already been foreshadowed. It is simply required of the law in order to prevent the coin and the money metal from being influenced by the market, or by supply and demand, and to give the coin and the metal a factitious purchasing power, which it would not possess if its value and price were left to the control of the market and natural laws, and which it would not possess, or which it would possess in a greater degree, without the force and compulsion of the law. By fixing a ratio it is expected to bring up to, and hold at, the legal ratio the value and market price of the whole supply of the metal which tends to be, or to become, cheaper, and to bring down to, and hold at, the legal ratio the value and the market price of the whole supply of the metal which is, or tends to become, dearer. But, still, something more is required to make bimetallism effective.

(*c*) Both metals must be made a legal tender in order that a debtor can discharge his debt by the payment of either metal. It is then assumed that, since a debtor can pay a debt with either one or the other metal, a dealer will be satisfied to sell his wares for either metal indiscriminately because he can pay his debts with either metal. But this result does not necessarily follow, because, if the one metal is depreciated in value with reference to the other, then, as to all future transactions, either provision would be made at the time of contracting for pay-

ment in the dearer metal, or else the price would be regulated by the value of the cheaper metal.

The moderate bimetallist indignantly repels the insinuation that he is advocating the theory that government can fix the price or value of anything, or that it can fix the price of silver or its relative value with gold, while the extreme bimetallist asserts with all confidence that the government can fix the price of silver, and that the mint not only fixes the price but creates a demand for the silver; and he triumphantly asks, who will sell an ounce of silver at a lower commercial price, regulated by the law of supply and demand, if he can exchange that ounce of silver at the mint for $1.29? However, both bimetallists agree that the main and vital principle of bimetallism is, that the law sets in motion an economic force which controls, or will control, the relative values of silver and gold. That the law, by declaring the two metals indifferently a legal tender in payment of debts at a certain ratio, powerfully creates a demand for the cheaper metal and lessens the demand for the dearer metal; that if at any time either of the two metals becomes less valuable than the legal ratio, every debtor, instinctively, will seek the cheaper coin with which to pay his debt. This increases the demand for the cheaper metal, which increased demand increases the price of the cheaper metal, while the decreased demand for the dearer metal lowers its price, thus maintaining the market prices of the metals at or near the legal ratio. This is claimed to be the great fundamental principle of bimetallism. To page 2

It is very evident that the law merely declaring both silver and gold a legal tender at a certain ratio will not of itself maintain the market prices of the two metals and hold those prices at a parity with the legal ratio; for we have both silver and gold in use as money in this country at the ratio of 16 to 1, and France and the other States of the Latin Union are still using both metals at the ratio of $15\frac{1}{2}$ to 1, and Germany is still using silver as a legal tender. In fact all the countries who, before the much-condemned demonetization of silver in 1873, were so using silver and gold, are still using both as legal tender at the old ratio, and still the market price of silver has not been sustained, and silver and gold are very far from being at a parity with the legal ratios. Instead of the commercial ratio being 16 to 1 or $15\frac{1}{2}$ to 1, it is more than 32 to 1.

If, then, bimetallism will hold the commercial ratio up to the legal ratio, it must be on account of the unlimited coinage of both metals; but how can unlimited coinage create a demand? It cannot; and bimetallism cannot in any way create an increased demand for the one and a decreased demand for the other of the metals, except that one of the metals be overvalued in the legal ratio; that is, that silver, for instance, is rated higher in the legal ratio than it is in the commercial ratio. The market price of one of the metals must be either above or below the ratio or price fixed by law, before bimetallism can begin its work, in which case the debtor will seek the cheaper metal, and thus, as they claim, create a demand for the cheaper metal which will

raise its price. The compensatory action or economic force is not put in motion by unlimited coinage unless such unlimited coinage reduces or raises the commercial or market price of one of the metals below or above the legal ratio. It cannot do so, since the very object and purpose of the legal ratio is to prevent the market, or the natural law, from controlling the price or value of the metal under unlimited coinage. The fixing of a ratio is, therefore, the vital force of bimetallism, and in this respect there is no difference between the moderate and the extreme bimetallist; both equally depend upon, and insist upon, the law fixing the ratio between the metals. The national bimetallist insists upon the ratio being fixed at 16 to 1, while the international bimetallist does not commit himself to any particular ratio, but indicates a ratio of not over 20 to 1, and leans decidedly to 15½ to 1. There is here, again, no difference between the two schools of bimetallism, at least not in principle. If they differ at all, it is only in degree. In both systems the mainstay and the principal support of both is the legal ratio, and under both systems the legal ratio is expected to hold the commercial ratio at practically par with the legal ratio, merely because it is the ratio established by law. While it is true that the legal ratio cannot alone and without the aid of the other two conditions—unlimited coinage and legal tender—accomplish bimetallism, yet, the two latter named conditions are mere helpers or assistants to the ratio. The unlimited coinage brings in the whole stock of silver as possible and available money supply at the

legal ratio, and the legal tender compels people to accept the silver money at the legal ratio.

Men speak of the mint price of silver or gold. The mint, however, makes or fixes no price on either. To say that it does, is as much as saying that the impression of a stamp upon a piece of the metal fixes the price of the metal, and that because a certain number of grains of silver constitute a dollar, therefore, that number of grains of silver is worth a dollar. But what is a silver dollar? Nothing more than a given number of grains of silver, $371\frac{1}{4}$ grains of silver, no more, no less. Hence if a man take an ounce of silver to the mint and exchange it for coin, or rather have it coined, what does he get? $1.29 in the form of money, but actually and as a matter of fact, he gets back his ounce of silver with a stamp added to show its weight and fineness. Gold remains gold, and silver remains silver at the mint, and after coinage neither is changed. If a man could take his ounce of silver and exchange it for $\frac{1}{16}$ of an ounce of gold, that would be fixing some sort of relation in the values of both silver and gold commercially; but if the ounce of silver were only worth in the market the $\frac{1}{32}$ part of an ounce of gold, no holder of gold would be foolish enough to exchange $\frac{1}{16}$ of an ounce of his gold for one ounce of silver, merely because that was the legal ratio between the two metals. Hence the mint fixes no price. It merely returns the metal stamped, and the person who takes his metal to the mint to be coined merely gets back the metal he took. If a person had one hundred gallons of refined petroleum

in bulk in a tank, and were to employ some one to run the petroleum into one-hundred-gallon cans, and then have the inspector certify to the quantity and quality of the petroleum in each can, would anyone say that the one hundred cans of petroleum is the price of the petroleum which had been in the tank? The petroleum in the cans was, and remained, the same petroleum which it was in the tank. Just so with metal taken to the mint to be coined. It is there separated, segregated, and divided up into a given number of pieces of a given weight and returned to the owner. The owner gets gold for gold and silver for silver, and there is no such thing as a mint price.

However, the expression, "mint price" is used in another sense; that is, the legal ratio or price of gold and silver; what is really meant is that legally a certain number of grains of silver is, in the currency, worth as much as a given number of grains of gold; that is, in law the gold price of $371\frac{1}{4}$ grains of silver is worth as much or is equivalent to one gold dollar, and this brings us back to the legal ratio.

What is fixing the ratio between gold and silver? The law does not say in express terms that the ratio shall be 16 of silver to 1 of gold. What it does provide is that a piece of gold containing 23.22 grains of pure gold metal shall be stamped at the mint, and it christens this piece of gold "one dollar"; it further provides that a piece of silver containing $371\frac{1}{4}$ grains of pure silver metal shall also be stamped, and it also christens this piece of silver "one dollar."

Now, all dollars are, in law, equal. Legally there is no distinction made between a gold dollar and a silver dollar. If the law had christened the piece of gold "one dollar," and the piece of silver a "mark," or a "franc," or had even distinguished it from the gold dollar by naming it "a silver dollar," it would not necessarily have followed that the silver dollar was equal in law to the gold dollar. It is the giving of the piece of gold and the piece of silver the same name, "one dollar," which makes the silver dollar the equal in law of the gold dollar, and which fixes the ratio of 16 to 1; the 23.22 grains of gold in the gold dollar being almost the $\frac{1}{16}$ in weight of the $371\frac{1}{4}$ grains of silver in the gold dollar. What the law does, then, is to fix the relative values between silver and gold—the relative values of two different commodities. In other words, the law fixes a gold price on silver and a silver price on gold. What is this but the Government fixing the prices of these two commodities? The moderate bimetallist may deny ever so stoutly that, under bimetallism, the Government fixes the relative prices of gold and silver; they may talk to the end of time about economic force and compensatory action, but they never can alter the plain and palpable fact that it is the Government's fiat, the mandate of the law, fixing the relative prices of gold and silver, upon which they rely to hold the market prices of these two metals up to the legal ratio. It is their demand that the Government fix this ratio or these prices, and, unless they expect that the law thus fixing the ratio between the two metals will hold the market

value of them up to the legal value, then, they are simply contemplating a gigantic scheme of repudiation, for, of course, a debtor will always pay in the cheaper metal. They therefore not only demand that the Government fix the ratio, but they rely and depend wholly upon this fixed ratio to sustain the market prices of the two metals, and to sustain bimetallism itself. They do, then, insist upon the Government fixing the relative prices of gold and silver just as much as the most extreme bimetallists do, and, in this respect, there is no difference between them, except that the extremist does not endeavor to disguise his demand and his theory under elegant phrases such as economic force, compensatory action, and the like. The extremist comes out plainly and demands that the Government fix the prices of the two metals; that it can do so, has done so, and that this Government action will hold the market prices up to the legal ratio. The moderate bimetallist makes, as we have seen, the same demand and for precisely the same reasons, and with the expectation of attaining the same result. Both schools of bimetallists demand that the Government shall by law rate silver much higher as compared with gold, than it is rated by the commercial ratio; in other words, that the law shall raise the price of silver relatively with gold much higher than the market price; and both confidently assert that this legal rating will have the effect of making the market price conform to it. The moderate bimetallist, whilst all the time protesting that he is not expecting the Government to fix the price or value of

silver and expects nothing of the kind, yet he is constantly demanding that the Government do fix this price; and then he says that the market price of the metals will be brought to conform to the legal ratio, not because the fixing of the price or ratio has anything at all to do with this expected result, but on account of an economic force which the Government sets in motion. One would suppose from the manner in which the bimetallist presents this point, that there is somewhere in the world an economic force especially created and designed by nature to maintain the ratio of 16 or 15½ of silver to 1 of gold, but which has been, since 1873, kept in a state of restraint or imprisonment, and which, if it were only released, would, forthwith, restore and maintain the old legal ratios of 16 or 15½ to 1, between silver and gold. Now, all this talk about an economic force is nothing more than an evasive plea. What does the bimetallist demand? Does he not demand that the law fix a ratio between silver and gold, and does he not demand that in this ratio silver shall be rated at a much higher price than it is in the market? The first thing, then, that the bimetallist asks is that the law shall violate the natural and economic law by which the relative prices or values of commodities are fixed; and he insists that this action by the statute law will overcome the natural, or economic law under which the gold price of silver has become so depressed; and then he complacently explains that it will not be the effect of the fixed legal ratio which will cause this rise in the value of silver, but an economic force which the Government has

released from imprisonment. This emancipated economic force is an increased demand for the cheaper metal which will raise its price, and a decreased demand for the dearer metal which will lower its price until both meet at the ratio established by law. Gold is to be dragged down, and silver to be dragged up, in price, until they meet at the fixed ratio, but when they have so met the price and purchasing power of gold will have been vastly diminished, unsettling all prices and business engagements and spreading universal ruin, loss, and suffering, all over the commercial world. And yet all this is accomplished not by the law fixing a ratio between silver and gold, but by an economic force. Economic force? economic fiddlesticks! If anything will accomplish it, it will be the force of the statute law, in defiance of the natural or economic law. Suppose the law did not fix the ratio, and there were still unlimited coinage of both silver and gold, and both were unlimited legal tender; that would bring in the whole supply of silver as possible money supply, just as gold now is. Silver would then circulate, as gold circulates, but it would have to circulate at its commercial exchange value, just as gold now does. What would the economic force do in this case? The answer is easily given. It would allow each metal to go its way in commerce on its own merits, just as it allows other commodities to do. Clearly, that is not the kind of an economic force the bimetallist is seeking for. What he wants is a law fixing the relative values of silver and gold, and then he wants an economic force that will force the relative

market values of these two commodities to conform to the arbitrary legal ratio. He wants to drag the value of silver up, and drag the value of gold down, and thus accomplish a depreciation of the standard of value. Happily the law is impotent; it cannot fix the relative values of the two commodities silver and gold, any more than it can fix the relative values of any other two commodities; and there is no economic force which can compel the relative commercial values of any two commodities to conform to a ratio, established by law, between them.

§ 3. In addition to the conditions essential for the creation of bimetallism, there are several other conditions which are necessary to secure its successful operation. Although the world was bimetallic, before the present century, yet the bimetallist asserts that the system never had a fair trial until about the beginning of this century in France. It is asserted that bimetallism did not have a fair show in England prior to 1696, because the coin in use was so debased, and because the fractional silver money was, in fact, as proportionately valuable as the full silver money. Hence England was constantly losing either one or the other of her money metals. It is further asserted that while the recoinage in England in 1696 removed what had been the chief obstacle to a fair trial of national bimetallism, yet gold was so distinctly overvalued in the circulation, that the consequence was that all her silver was driven out of circulation, and bimetallism had no opportunity of demonstrating just what it was capable of doing. The economic force never was let loose in England.

It is further asserted that the experience of France down to the year 1785 was the same as that in England, except that in France it was the silver that was overrated, and consequently she lost her gold,—that for these reasons bimetallism was unable to accomplish its mission in France. These adverse causes kept the economic force in subjection in England and France.

Confessedly, bimetallism was a signal failure in the United States, but the bimetallist claims that it was such a failure because, first, up to 1834, the country had so little of the precious metals in use as money, and had so little commerce that bimetallism had nothing to work on; that there must be considerable quantities of both gold and silver money in a country in order to give bimetallism something to create a demand upon, or to decrease the demand of; and, second, that up to 1834 silver was so highly overrated that it drove all the gold out of circulation; and, third, that by the act of 1834 gold was overrated, and therefore all the silver was driven out of circulation. For these reasons, it is asserted bimetallism never had a fair trial in the United States, and the economic force was thus held in restraint.

Again, bimetallism, even though it be fairly and successfully launched into full operation can only continue as long as there remains in circulation an appreciable amount of that metal which at the time tends to become dearer, and which can be freely exchanged for the cheaper metal at the legal ratio. After the dearer metal has become so scarce in the

circulation that it will not be freely exchanged for the cheaper metal at the legal ratio, then bimetallism fades, withers, and dies, and the country becomes monometallic, having the cheaper metal money as its circulating medium, and as its measure of values. It will thus be seen that bimetallism is an exceedingly delicate, sensitive, and short-lived plant. It requires certain definite proportions of two metals, that is, 16 of silver to 1 of gold, and a plentiful and constant supply of both to sustain it, and the failure of the supply of either will cause it to die.

Again, bimetallism can only sustain the market values of silver and gold at the legal ratio within, what is called by the bimetallist, reasonable limits. The efficiency of the bimetallic system being a question of proportion, a matter of degree, and as long as the natural or commercial causes do not tend to create too great a divergence between the commercial ratio between silver and gold, and the legal ratio, bimetallism can sustain the ratios at or near an equality; but when, on account of natural or commercial causes,—such as an extremely great addition to the supply of one of the metals, or a great diminution in the supply of one of the metals—the tendency is to too great a divergence between the commercial ratio and the legal ratio, then the bimetallic law can no longer resist the change in the commercial ratio, and consequently, bimetallism will break down. This is the excuse given for the failure of France to maintain her bimetallic system after Germany demonetized silver in 1873. This threatened

decline added to the actual decline, which had then actually taken place, caused the downfall of the French bimetallic system. And still again, it is not pretended that bimetallism can or does prevent what they call slight differences or variations in the commercial and legal ratios; such slight variations as two to three or four per cent. between the commercial and legal ratios cannot be prevented, but they are immaterial, as the bimetallist alleges. The limit of the effective operation of bimetallism is between these so-called slight variations and the so-called too great divergences; but what are "slight variations" and what are "too great divergences" are left wholly undefined and indefinite. If bimetallism is to be of any good at all this limit should certainly be defined. It is very unsatisfactory to be left with the explanation that bimetallism cannot restrain what they call the slight variations in the commercial ratio of the two metals, nor can it restrain too great divergences or variations in the commercial ratio, but it can restrain any divergence between one that is slight and one which is not too great. What is slight, and what is too great? This looks very much like a confession on the part of the bimetallist that bimetallism does not control or restrain the commercial relative values of silver and gold at all, and it most certainly does not. If bimetallism is at all effective, how could there be any great divergences between the market and the legal ratio between the two metals? How could any such divergences occur while the economic force controlled the relative values of the two metals? If

bimetallism cannot control slight or great divergences, then it cannot control any at all. But to return to the auxiliary conditions necessary for the successful operation of bimetallism. We have found that these auxiliary conditions are:

(*a*) The coin in use must not be debased.

(*b*) The fractional silver money must not contain as much silver proportionately as a silver dollar.

(*c*) Neither metal must be overvalued or undervalued in the legal ratio; that is, the legal ratio, when fixed, must conform to the commercial ratio as existing at the time of the creation of the legal ratio.

(*d*) The country where bimetallism is to operate must be wealthy, and have a great deal of commerce.

(*e*) That there must be considerable quantities of both gold and silver money in the country.

(*f*) With all these conditions favorable, bimetallism will continue its beneficent operations as long as any appreciable quantity of the metal, which at the time tends to become dearer, remains in circulation in the country, and can be freely exchanged for the cheaper metal at the legal ratio, and no longer.

(*g*) With all the foregoing conditions favorable, bimetallism does not pretend to be able to restrain slight variations (such as two to four per cent.) between the legal and the commercial ratios of silver and gold; nor does it assume to be able to prevent any divergences between the two ratios, caused by natural or commercial causes which are too great for the bimetallic system to restrain, but that it can restrain any variations, between the two ratios, within

the limits, bounded on the one side by the aforesaid slight variations and the aforesaid divergences which are too great to be restrained by the bimetallic law on the other side. The bimetallist, who cannot at all times readily find an excuse for the failure of his system, must certainly be in extremely hard luck. Manifestly, bimetallism in the form as advocated at present, must fail according to the above conditions, which the bimetallist himself has laid down as essential to the successful operation of the system; because, as at present proposed, silver is to be largely overvalued in the legal ratio; that is, the value fixed by law is to be greater than the existing commercial value. It was this overvaluation of one of the metals (but only in a lesser degree) which they assert was the cause of the failure of bimetallism in England, in France prior to 1785, and in the United States: and yet the bimetallist, with these admitted failures staring him in the face, seriously proposes to again make the attempt to successfully operate bimetallism by overrating, or overvaluing silver, over thirty or forty times greater than either of the metals ever was overvalued by any law heretofore.

§ 4. If government can by law fix the relative values or prices of two commodities,—gold and silver—then it can fix the relative values of any other two commodities. It can fix the price in gold of each of all the other commodities; in other words, government can fix and maintain the prices of all commodities. If any principle has ever been settled, it is that government or the law cannot fix the prices of any article or commodity, that these prices must

be determined by the natural laws, supply, demand, the higgling of the market, etc. Bimetallists admit this, but insist that government can put forces in motion which will influence prices against the natural laws. They say, that under bimetallism, the bimetallic increased demand for the cheaper metal, or the metal which tends to fall in value, for use as money will increase its value, and a corresponding decreased demand for the dearer metal, for use as money, will decrease its value. Now, it is evident that bimetallism cannot prevent, nor is it intended to prevent, the operation of natural or commercial causes on the relative values of silver and gold, in the first instance; for the bimetallic demand is only created after the market value of either the one or the other of the metals has fallen or raised. The theory is, that after this fall or rise in the commercial value has taken place, then, by virtue of the bimetallic law an increased demand for monetary purposes is created for the cheaper metal, which increases its commercial value, and the increased demand for the cheaper metal effects a corresponding decrease in the demand for the dearer metal, thus decreasing its commercial value, and by these means the commercial ratio is restored to a parity with the legal ratio. In other words, the theory is, that the law can so manipulate the demand for a commodity that it will compel the commercial price of that commodity to conform to a price fixed by the law, that the law can cause the demand for silver and gold, for monetary uses, to be so manipulated that it will compel the market prices of all of both metals in

existence to conform to prices fixed by the law. The law may manipulate or manufacture a demand for a commodity, and, possibly, by so doing may increase or diminish its price, but it never did and it never can fix that price, and compel the people either to give or accept that price for the commodity. Merely influencing the prices by increasing or decreasing the demand is one thing which it is possible to do; but to influence the prices by an increasing or decreasing demand and to compel these prices to conform to, or agree with, the arbitrary prices fixed by the law is quite another thing, and it cannot be done. It cannot be done because, stripped of all its fine phrases, it amounts to nothing more than the law fixing the prices of silver and gold. Deny it, conceal or disguise it, sugar coat it as much as you please, it comes to this at last. But the bimetallist says that this not only can be done, but actually has been done in one notable instance, in France from 1785 to 1873. The bimetallist always produces this one instance in the monetary history of France, with a grand flourish of adjectives, as infallible, incontrovertible, etc., proof of the correctness of their theory, and they solemnly declare that no one, whose opinion is worth considering, ever questioned it. Whether my opinion be worth anything or not, I do question the theory, and I assert that during the period named the market ratio between silver and gold was not kept at a parity with the legal ratio, or even approximately so, for any practical or monetary purposes; and that the market ratio was not, during this period, restrained from greater divergences from

the legal ratio fixed by the laws of France, by the bimetallic system then in force in that country. It is strange that men should construct a principle or a theory out of one instance, which may, after all, be a mere coincidence. One instance is not sufficient upon which to construct a theory. After all, notwithstanding all his strong and emphatic assertions, the bimetallist only assumes that this alleged approximation of the market to the legal ratio was caused by the action of the bimetallic law fixing the ratio of silver to gold at $15\frac{1}{2}$ to 1. His whole argument is nothing more than mere assumption. He finds a certain effect which could have been caused by perfectly natural and commercial causes; instead of attributing the effect to the natural causes, he assumes that it was caused by artificial causes, in defiance of the natural causes, and while doing so he admits that the artificial causes failed in every other instance. But let us see about France.

In 1785, the ratio of $15\frac{1}{2}$ of silver to 1 of gold was established in France. France had been bimetallic before that, but the bimetallist alleges that it failed for the reasons stated in the preceding section.

During the period 1501–1600 the ratio ranged from 10.75 to 11.80, a difference of 1.05 points, or about $8\frac{9}{10}$ per cent. in 100 years. 1601–1680, a period of 80 years, it ranged from 12.25 to 15.00, a difference of 2.75 points, or about $22\frac{1}{2}$ per cent. 1687–1785, a period of 98 years, it ranged from 14.14 to 15.52, a difference of 1.38 points, or about $9\frac{8}{10}$ per cent. 1785–1803, the first period of the legal ratio of $15\frac{1}{2}$ to 1, the ratio ranged from 14.65 to 15.68, a differ-

ence of 1.03 points, or over 7 per cent. in 18 years.

1803–1850, it ranged from 15.04 to 16.25, a difference of 1.21 points, or over 8 per cent. in 47 years.

1851–1866, a period of 15 years, it ranged from 15.19 to 15.70, a difference of .51 points, or over $3\frac{1}{3}$ per cent. 1866–1873, a period of 7 years, it ranged from 15.43 to 15.92, a difference of .49 points, or over $3\frac{1}{10}$ per cent. The ratios above given are the commercial ratios, and this brief statement shows that at no time did the commercial ratio conform to the legal ratio, and it further shows, beyond peradventure, that the proportionate divergences of the commercial from the legal ratio were greater after 1785, and after the much-lauded bimetallic system of France at the ratio of $15\frac{1}{2}$ to 1 went into effect, than they were before that period. Furthermore, the greatest divergence was during the period of seven years from 1866 to 1873.

From 1820 to 1847 gold was at a premium in France, reaching at times as high as 3 per cent. This difference is altogether too great to be called an approximation to the legal ratio. The bimetallist is, however, equal to the occasion, and confidently asserts that a mere trifle, such as three per cent., is not an appreciable difference, but is really an approximation of the commercial to the legal ratio; and he further asserts that had it not been for the bimetallic law the difference would have been a great deal more; but, as it was, gold was always to be had in France at a small premium, and, therefore,

that gold remained in circulation all the time side by side with silver at the legal ratio. Surely they cannot expect any reasonable being to believe that gold remained in circulation at the legal ratio, when it was all the time at a premium. Who would pay a premium of 3 per cent. above the legal ratio for gold if it was still current in the currency at the legal ratio ? No man in his senses would discharge a debt of $100 by the payment of $103, if he could just as well pay it with $100. Really, the bimetallist expects altogether too much if he expects to be believed when he says that gold was, during the whole of this period, in circulation in France at the legal ratio. During the period 1850 to 1866, silver was at a premium in France. Mr. Francis A. Walker, in his work entitled *Money, Trade, and Industry*, page 154, says that during this time silver was at a premium ranging from 1 to 3 per cent. Again, on page 185 of the same work, he says:

"Gold had been so far cheapened by the discovery of the California and Australian mines that it formed the greater part in value of the actual circulating medium of the bimetallic countries, and was at a discount of one, two, or three per cent., in comparison with silver; but the bimetallic system had for more than twenty years kept gold from being so far cheapened as to drive all the dearer metal out of the countries of the 'double standard.' Silver was still to be had in indefinite quantity in the Latin States at a slight premium over 15½ to 1; and so long as this continued, gold and silver could not break apart, and come to be governed by their separate conditions of supply and demand."

Here he treats a discount of 3 per cent. on gold as a mere trifling difference, and consoles us with the reflection that as long as such a trifling difference existed, gold and silver could not break apart, and be governed by their separate conditions of supply and demand. Why were they not broken apart? How much more of a discount than 3 per cent. would be required to break them apart? Any difference at all would break them apart, and you might as well say that a discount of 15, 20, or even 50 per cent. would not break them apart, as to say that 3 per cent. would not; and each metal was subject to, and must have been governed by, its own separate condition of supply and demand. If not, what caused the fall in, or the discount on, gold? Was it the action of the bimetallic law which caused the value of gold to fall? Gold and silver were driven apart, and the value of each metal was governed by its own conditions of supply and demand then, as it always was, and as it now is. Whether 3 per cent. was a trifling divergence or not it was sufficient to drive the dearer metal out of circulation, and France was, in fact, silver monometallic between 1820 and 1850, and gold monometallic from 1850 to 1866. Mr. Walker says that silver was always to be had in France during the latter period at a small premium—not over 3 per cent.—and hence that silver was not all driven out of France. It is not a question of the dearer metal being driven out of the country, but whether it is still in circulation as money for exchange at its legal ratio or price. Gold or silver is always to be had in any of the

civilized countries, if you have the wherewithal to pay for it. During our late civil war the greenbacks fell until they were at a discount of 65 per cent., yet gold was always to be had in this country on payment of the price; still, that was never taken as an evidence that gold was still in circulation as money in this country. When the value of one kind of metal either becomes greater or less than the legal value, then, the money of the metal which is the dearer is simply withdrawn from the circulation, because, as already explained, the holder of the dearer metal money refuses to dispose of it in exchange at its legal rating or price, but insists on exchanging it only at its commercial value or price; and such withdrawal of the one kind of metal from the circulation of itself makes the country either silver monometallic, or gold monometallic. And as soon as this takes place, bimetallism has exhausted itself, and has confessedly no longer any influence in controlling the commercial value of the cheaper metal which is retained in the circulation, or of the dearer metal which has been driven out of the circulation, but each will rise or fall wholly as controlled by its own conditions of supply and demand, and independent, and irrespective, of the bimetallic law. Any small discount or premium of even not more than $\frac{1}{2}$ per cent. is sufficient to drive the dearer metal out of circulation. The dearer metal refuses to associate on terms of equality with its depreciated companion, and this will make the country monometallic. So that a premium or discount of 3 per cent., or even less, is not such a light, trifling mat-

ter, but is a most serious thing, because it deprives the people of the use of a great portion of its money, and of the best portion of it, leaving them only the worst. And such a premium or discount cannot be regarded as a trifling thing as far as concerns bimetallism, for it drives out bimetallism too, and it remains out the same as if it never had existed, until either one of two contingencies happen, if they ever do happen,—that is, until the commercial value of the cheaper metal which is retained in the circulation rises above the commercial value of the dearer metal, either by a rise of its own value owing to its own conditions of supply and demand, or by a fall in the commercial value of the dearer metal which had been driven out of circulation owing to the conditions of its own supply and demand. This small premium was just as effective in preventing silver and gold from passing in the currency as equivalents, and was just as fatal to bimetallism itself, as if it had been 15, 30, or even 50 per cent.

The fall from 1866–1873 was about 3 per cent. A fall of 3 per cent. in a short period of seven years is also a serious matter, and it was so serious that it induced France and the other States of the Latin Union to suspend the coinage of silver on private account, and they did this to avoid becoming silver monometallic, for gold was already at a slight premium. The coinage of silver on private account thus ceased because silver had fallen, and silver did not fall because of the cessation of its coinage on private account. Bimetallism had, then, failed of

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its purpose during this last period just as it had, in the previous periods. I therefore repeat that bimetallism did not, during any, or all, of the periods mentioned, keep the commercial ratio of silver and gold at a parity with the legal ratio, nor did it do so even approximately for any practical or monetary purposes.

Did the bimetallic law restrain the natural law from creating greater divergences between the commercial and the legal ratios than would have occurred in the absence of the bimetallic law? Of course no one knows that there would have been greater differences, between the market and the legal ratios, than there were if there had been no bimetallic law (bimetallism) in existence; so that, to allege that these differences would have been greater must be mere surmise and speculation. But surmise answers the bimetallist's purpose just as well as an absolute certainty, and so he asserts, not as a matter of opinion, or of belief, but as a certain and absolute fact, that there would have been greater differences between these two ratios had it not been for the restraint of the bimetallic law.

We have seen that from 1501 to 1600, a period of one hundred years, there was but a fluctuation of 1.05 in the market ratio; that during the period 1601–1680 there was a fluctuation of 2.75 in the eighty years, or about 22½ per cent.; that during the period 1687–1785,—almost one hundred years—there was a fluctuation of 1.38 in the market ratio. During all these periods bimetallism was confessedly a failure, and the very fact of the great difference between the

fluctuations of the two periods of 1501–1600, and 1687–1785, and the period of 1601–1680 shows that no bimetallic law did or could have controlled the market ratios, but that these values were controlled entirely by natural and commercial causes. If it should be claimed that bimetallism did control the market values during these periods, then I ask what does the influence of a system amount to which causes a fluctuation of 22½ per cent., in one period of eighty years, and fluctuations of a much less than one-half of that percentage during each of two periods of one hundred years before and after; and can these fluctuations be regarded so slight and unimportant as to enable anyone to claim that during these periods the bimetallic law held the market ratio approximately at a parity with the legal ratio? Surely not. If 22½ per cent., or even 10 per cent., or 8 or 9 per cent., is regarded as slight and unimportant, what per cent. will be considered enough to be important? If 10 per cent. of a fluctuation in the market price of a commodity is holding the price of that commodity approximately the same, then where does approximation end? It is therefore very evident that the bimetallic law had no control over the market ratio between silver and gold during the periods above mentioned.

During the period 1785–1803, the first period after the introduction of the famous ratio of 15½ to 1, the change was over 7 per cent., in eighteen years; proportionately, this would have been at the rate of over 38 per cent. for a period of one hundred years; over four times as much as the changes which took

place in either of the two one-hundred-year periods, 1501–1600, 1687–1785.

During the period 1803–1850, there was a change of over 8 per cent., during a period of forty-seven years, which would, proportionately, have been at the rate of over 16 per cent., for a period of one hundred years; almost double what it was in either of the one-hundred-year periods, 1501–1600, 1687–1785.

During the period 1850–1866 the change was over $3\frac{1}{3}$ per cent. in 15 years, which would, proportionately, be a change of almost 20 per cent. for a period of one hundred years; considerably over twice as much as the change in either of the one-hundred-year periods, 1501–1600, 1687–1785.

During the period 1866–1873, the change was over $3\frac{1}{10}$ per cent. in seven years; proportionately, this would have been a change of over 44 per cent. in a period of one hundred years; about five times greater than the changes which took place in either of the one-hundred-year periods, 1501–1600, 1687–1785.

These figures show conclusively that the commercial ratio of silver to gold was not as steady since the adoption of the famous ratio of $15\frac{1}{2}$ to 1, as it was before. It was held steadier before the legal ratio of $15\frac{1}{2}$ to 1 was fixed than it ever was since, consequently, it follows, naturally, that the bimetallic law with its ratio of $15\frac{1}{2}$ to 1, did not hold the commercial ratio up to the legal ratio during the periods 1785–1873 or 1803–1873. The commercial ratio was not as steady after 1785, or 1803, as it was

before when, confessedly, bimetallism was a failure, and hence the commercial ratio must have been at all times governed by the separate conditions of supply and demand of each metal. We are, then, forced to one of two conclusions—either the bimetallic law since 1785 did not control the commercial ratio between silver and gold, but left it to be controlled wholly by the separate conditions of the supply and demand of each metal, or, if the bimetallic law did, during that period control the commercial ratio, then it is not as satisfactory a force with which to control the relative values of silver and gold as the natural law is, for the natural law held it steadier in the prior periods than the bimetallic law did in the subsequent periods. However, the bimetallist is liable to change his position, and, notwithstanding the fact that he has so thoroughly committed himself upon the question of bimetallism not having had a fair trial before the adoption of the French legal ratio of $15\frac{1}{2}$ to 1, and that, consequently, it could not exert its influence, still, he may claim that France was bimetallic prior to 1785, and that bimetallism did, actually, hold the market ratio steady during those periods as well as during the subsequent periods. Be it so, then, can a market ratio which varies at the rate of 9 per cent. in one period of one hundred years, at the rate of $22\frac{1}{2}$ per cent. in a period of eighty years, 10 per cent. in another period of one hundred years, at another time at the rate of 38 per cent. per one hundred years, at another time at the rate of 16 per cent. per one hundred years, at another time at the rate of

almost 20 per cent. per one hundred years, and at another time at the rate of over 44 per cent. per one hundred years—be said to be steady ? Can it be said to have kept so steady as to lead to the "infallible inference" that some cause—the bimetallic law—had restrained the natural law ? Can it be said that such a showing is conclusive evidence that the bimetallic law prevented the natural law from causing still greater changes ? Are these what the bimetallist calls slight or immaterial changes, and really an approximation of the market to the legal ratio ? If so, then, I repeat, what percentage is large enough to be material ? If a percentage of change is sufficient to drive one of the metals out of circulation, disarrange all prices and business, make the country monometallic, and break down bimetallism itself, is nothing but a small, insignificant variation, really proving that bimetallism had saved the world from the most dire disasters, then, I ask, what percentage of a change would be material, and how great must that percentage be, before bimetallism can be robbed of the credit of having, through its beneficent action in converting itself into a parachute, saved the world from destruction by arresting the fall of the immense masses of falling gold ? These variations were material and most serious. The figures themselves demonstrate it more conclusively than words can. If these changes in the ratio between gold and silver are but slight and immaterial changes, and are really approximations to the same ratio, then certainly there has been nothing but a slight and immaterial change in the prices of commodities since 1873, and

prices are approximately the same now as they were then. Calling attention to these things serves to show how unreasonable the bimetallist's contention is. He is not only unreasonable, but he is inconsistent, treating the degree of changes in the relative prices of gold and silver as unimportant, and the same degree of changes in prices of commodities as being utterly ruinous to the country. He claims that his system prevented a greater fall in the relative value of gold, notwithstanding the tremendous production since 1850, and yet the figures show that after 1866, after gold had ceased flowing into France, and up to 1873, there was a greater change, proportionately, in the commercial ratio, than there had been from 1850–1866, or ever before. If the bimetallic law held the commercial ratio steady from 1850–1866, why did it not do so during 1866–1873 when the strain was not nearly so great? If the bimetallic law cannot prevent slight variations in the market ratio, how can it prevent the greater variations? It is idle to say that it can prevent the greater and not the less, and the truth is that the conclusion to be drawn from these facts and figures, and the only conclusion which can be drawn from them, is, that the much-vaunted bimetallic law, or the economic force, had no influence at all during all these periods on the market ratio or relative values of silver and gold.

We have seen that the bimetallist's claim, that government by fixing a certain ratio, sets a certain economic force in motion which will compel the market ratio to conform to the legal ratio, is, in

effect, nothing more than saying that government can fix the prices of all other commodities as well as silver and gold; and we have further seen that the notion that government can fix prices and maintain them at the prices fixed is contrary to all experience. We have found that the bimetallist has simply assumed that it was the influence of the bimetallic law of France which held the market ratio of silver and gold up to the legal ratio. We have found that the market ratio of silver and gold was not held up to the legal ratio, at any time during the period in question. We have found that, in fact, the bimetallic law had no influence in holding the market ratio up to the legal ratio, and that each metal was, at all times, subject to its own conditions of supply and demand. And finally, and conclusively, the bimetallic law of France with its mythical economic force, which, as they say, creates an increased monetary demand for the cheaper metal thus increasing its value, and a corresponding decreased monetary demand for the dearer metal, thus decreasing its value, *could not, and did not*, prevent greater changes in the market ratios of silver and gold, simply because the use of a precious metal as money does not, as has been shown in Chapter VI. of Part I. of this work, create such a demand for the metal as will cause a rise in its market price, or in its purchasing power, and this being so, it follows that neither an increased nor a decreased demand for the metal for monetary purposes can affect its price or its purchasing power. This alone, independent of all the other reasons and considerations, is sufficient to

show that the whole bimetallic theory has no basis in reason, principle, fact, experience, or history, to stand upon.

The allegation that the demonetization of silver in 1873 caused the recent fall in the market price of silver is, for the same reasons, and as shown in the said Chapter VI. of this work, groundless. It has already been shown that demonetization did not cause the fall in the price of silver.

§ 5. The superiority claimed by the international bimetallist for his system over that of national bimetallism, is based upon the assumption, that the joinder of several of the principal commercial nations in a bimetallic system will strengthen the system, increase its stability, and will enable it to continue and prolong its beneficent action for a much longer time than a single nation can. The claim is that this increase of strength and stability, and prolongation of the beneficent bimetallic action will be secured by the co-operation of several States for the following reasons:

(1) It increases the stock of money metal by uniting all the money-metal stock of all the States in the league, so that it will take a longer time to withdraw all of the metal which at any time tends to become dearer, thus prolonging the existence of bimetallism.

(2) It will cause a greater increased demand for the metal, which tends to become cheaper, and this greater increased demand will cause this metal to rise more in value, than it would if that demand were confined to one of the countries.

(3) To the extent of the number of States co-operating it reduces the number of outside States which are likely to demand the dearer metal, and thus it reduces the demand for the dearer metal and prevents its drain from the States comprising the league.

These reasons look very plausible, but, unfortunately, they are all fallacious.

(1) The stock of money metal in the league is not increased, neither are all the stocks of all the States in the league thrown into one common fund to draw from. Each State will hold and keep its own stock precisely in the same manner as if it had not entered into the league. There will be no larger stock of the dearer metal after the formation of the league, than there was in the States before, and it would not take any longer time to withdraw it from all the States jointly, than it would to withdraw it from them severally.

(2) Whether or not it would create a greater increased demand for the cheaper metal, depends upon circumstances. If silver, for instance, were the cheaper metal, and all of the countries joining the league were already stocked up with a full supply of silver as our country, France and the other States of the Latin Union, and Germany now are, and no State which had theretofore used only gold, such as England, for example, joined the league, then there would be no greater increased demand for the cheaper metal.

(3) Whether there would be any less demand for the dearer metal in any one or more of the States of

the league after its formation than there would have been had it not been formed, depends, also, upon circumstances. It by no means follows as a matter of course. The necessities of one of the members of the league may compel it to dispose of all its stock of the dearer metal to either some State outside of the league or to some one or more of the States within it, in which case the member parting with the dearer metal will become monometallic in spite of the league; or the necessities of one of the members of the league may compel it to withdraw the dearer metal from one or more of the other members.

The vice of the whole argument is, that it assumes that the only way in which the metal which tends to become dearer can be withdrawn from the circulation of a country is to drive the metal altogether out of the country. As already explained, this is not at all necessary. Every pound, dollar, franc, or mark of the dearer metal may remain in the country, and yet not a pound, a dollar, a franc, or a mark, be in circulation as money; that is, being offered in exchange at the legal ratio or rating.

When we speak of the metal which tends to become dearer we mean gold, and when we speak of the metal which tends to become cheaper we mean silver, and it will be simpler to plainly say gold and silver. It is exceedingly doubtful whether, even if all the commercial nations of the earth joined in a bimetallic league, it would in any way cause any decreased demand for gold. When one considers the vast amounts of all the obligations, given by governments, states, countries, municipalities, school-

districts, and other governmental subdivisions, railroads and other corporations, and individuals, where the principal and interest are payable in gold, it is not hard to understand that the monetary demand for gold would, at all times, though it were the dearer, be greater than for silver, though it were the cheaper; and that, if it were true that the monetary demand for a metal would increase its value, then, whenever silver became cheaper, gold would continue to become dearer and dearer, because if silver did not exchange on equal terms with gold, no creditor who was entitled to the gold would accept silver; whereas if the silver exchanged on an equality with gold, a creditor would accept silver or gold indifferently. The above example is only given to show that the bimetallist is mistaken under his own theory, even if it were correct.

It will be observed that the whole claim of superiority of the international over the national system, is that the international more greatly increases the demand for the cheaper metal, for use as money, and more greatly decreases the demand for the dearer metal than the national system does. But we have seen that the use of a precious metal as money does not create such a demand as will increase its price or purchasing power, hence any greater or any lesser increase or decrease of the demand of a metal for use as money is a matter of entire indifference, and will not affect the price or the value of the metal in any degree. International bimetallism has, therefore, no claims to any great superiority over national bimetallism. However

similar both systems may be, and however subject both are to the same arguments and objections, yet, in one respect, there is a wide difference between the demands of the national and the international bimetallist.

In addition to all his other demands the national bimetallist demands "such legislation as will prevent, for the future, the demonetization of any kind of legal-tender money by private contract." Waiving all questions as to the constitutionality or effectiveness of such proposed legislation, the object is obvious. It is to prevent the people from contracting themselves out of bimetallism—that is, that they must accept it and its money whether they want to or not. I will let history answer whether any government ever was able to compel its people to accept and use any sort of money it saw fit to impose upon them. Clearly the object of this legislation is to nullify all contracts made payable in gold, and to compel a creditor to accept silver in payment against the express terms of his contract. It excludes gold from being contracted for and dealt with as any other commodity is contracted for and dealt with. This is such a gross and unwarranted interference with the right of private contract that one can scarcely believe it was ever seriously advocated by any person; and yet it has been, and still is, so seriously advocated by one of the great parties of our country.

§ 6. Suppose, however, that the bimetallic system can be made to work, and that it can hold the market values of the two metals approximately up to the

legal ratio, what good will it do, or what is to be gained by it ?

The benefits claimed to follow from the introduction of bimetallism are:

(1) It will establish an approximate par of exchange between the gold-using and the silver-using nations.

(2) It will secure a higher degree of stability in the compound mass of money thus formed than could possibly exist with the two metals separate and independent in their value movements.

(3) By increasing the volume of money it will cause a rise of prices, which will stimulate activity in trade and business, and will thus be of incalculable benefit to mankind.

(1) The bimetallist claims that the demonetization of silver has broken the par of exchange between the gold-using and the silver-using countries. What is meant by the expression "broken par of exchange," is that since the demonetization of silver the fluctuations in the value of silver have been so great and so frequent, that a par of exchange no longer exists between these countries; and the evils resulting from the so-called broken par of exchange have been, by the bimetallists, magnified to such an extent that it creates a suspicion that the evil is wholly imaginary. Competent and reliable opinion has been given to the effect that it has not limited or burdened the trade between these countries to any serious extent. The only way in which this broken par of exchange works so injuriously, as the bimetallist alleges it does, is, that a manufacturer or

seller of goods in a gold-using country, in his trade with a silver-using country, may suffer a loss, on account of a fall in the value of silver, in which money he was to be paid, before the proceeds of his sales can be brought home to him. That is, the whole cause of complaint about this exchange is centred in this one fact,—the fluctuations in the value of silver. The bimetallist assumes (as he assumes everything else) that the restoration of bimetallism will make silver more steady in value, and in this way the approximate par of exchange will be established. But will bimetallism hold the relative values of silver and gold steadier ? It has just been shown that neither on principle can it do so, nor in fact has it ever done so. Since any increased or decreased demand for a precious metal for use as money does not in any way affect either the price or the purchasing power of the metal, and, since the only power claimed for bimetallism is that it increases the monetary demand for the cheaper metal, and decreases the same demand for the dearer metal, it follows that bimetallism cannot render the value of silver any more steady than its own conditions render it; and, consequently, the first-claimed benefit of bimetallism has no merit; there is absolutely nothing in it.

(2) Mr. F. A. Walker, in his work, *International Bimetallism*, page 148 *et seq.*, explains how bimetallism will secure a higher degree of stability in the compound mass of the money formed by it, than can possibly exist with the two metals separate and independent in their value movements, as follows:

"If, then, each metal has its value in commerce subject to the natural causes which affect the supply and to commercial causes which govern the demand, it is evident that we shall have an incessant fluctuation, not only in the relation between the two metals, but also in the relation of metal money to prices. Such fluctuations cannot, in the nature of the case, be suppressed; but if the two metals can somehow be joined together in their function as money, it is highly reasonable to expect that the aggregate influence of fluctuations in price will be reduced. There will be, on the whole, as things are likely to go, a considerable *compensating effect*, giving the result of a greater degree of steadiness in values. Whenever one metal tends to fall and the other to rise, or where both tend to rise or to fall with different degrees of rapidity, the operation of the bimetallic system must be in the direction indicated."

In his work entitled *Money, Trade, and Industry*, page 166, etc., Mr. Walker explains the operation of bimetallism by which greater stability of values is secured as follows:

"The object of bimetallism is, by joining the two metals together in the coinage, at a fixed ratio, to diminish the extent of the fluctuations to which the value of each would be separately liable, by generating a compensatory action between the two, by which the cheapening metal shall receive a larger use, while the appreciating metal drops partially out of its former demand, thus making the two fall together, if there must be a fall, or rise together, in the opposite case; or, conceivably, making the tendency of one to fall precisely counteract the tendency of the other to rise.

"Thus we may suppose four successive cases to illustrate the working of this principle.

"The first is, where the demand for the use of either metal in trade remaining the same, a large increase in the supply of one metal, A, takes place, the supply of the other, B, remaining unchanged. In this case, without the bimetallic system, the value of A would tend to fall rapidly through a considerable space, while the value of B would stand fast. With the bimetallic system, the joint supply of the two metals would be applicable to meet the joint demand of the two. Now, as the joint supply has been increased without any change in the joint demand, there must be a fall in value; but the fall will be in the two indistinguishably, except for a slight degree of delay and friction in exchange. Both will fall, but the depth of the fall will be diminished as the surface over which it is to take place has been enlarged.

"The second is where, the demands of trade for both metals remaining the same, a diminution occurs in the supply of A, while the supply of B remains unchanged. Here, by the operation of the same principle, a rise in the value of money will take place, since the joint supply has been reduced without any corresponding change in the joint demand. The rise will be a rise of the two metals indistinguishably, the height of the rise being diminished as the surface over which it is to take place has been enlarged.

"The third case is where, demand remaining the same, the supply of both metals undergoes a change in the same direction, either of increase or of diminution, at the same time. In this event, the fall or rise will again be of the two indistinguishably, the point reached being a mean between the points which would have been reached by the two severally.

"The fourth case is where, demand remaining the same, the supply of the two metals undergoes a change at the same time, but in opposite directions; A through diminution, B through increase. In this case, the opposite tendencies will counteract each other. If of equal force, the value of money will be stable; if of unequal force, there will be movement in the direction of the stronger to the extent of the difference between the two. Instead of one falling and the other rising in value, the change will be wrought in the two indistinguishably.

"It will appear from the foregoing statements that, under the bimetallic system, the value of money will be liable to vary more frequently than under the monometallic system. That is, a change in respect to either constituent of the money mass will produce a change of value; and it is apparent that the chances of change are greater with two constituents than with one. On the other hand, the variations under the bimetallic system are likely to be less extensive."

While these statements look very fair on their face, yet they are not so. Silver and gold are not, as has been shown in Chapter VI. of Part I. of this work, thrown together or mixed in one compound mass. Neither is there, under bimetallism, any joint supply of the two metals, and it is highly improper to regard, or to speak of, the two metals as being joined and united into one joint supply, or into one compound or joint mass of supply. Equally improper is it to speak of a joint demand upon the joint or compound mass of the supply of both metals, or of a demand upon the two metals jointly. All of these expressions are incorrect, because they are not

in accord with the actual facts, and they are, as will be shown, directly contradictory to, and subversive of, the fundamental principle of bimetallism.

There never was, nor will there be, under bimetallism, any such thing as a joint or a compound mass of supply of silver and gold. All that bimetallism does, in this respect, is to have the law declare that a certain portion of silver shall be equal, in the circulating medium, to a certain portion of gold. It is this equality which constitutes bimetallism, and its mission is to preserve this equality. Now, if the whole amounts of silver and of gold, which are to be used as money, were compounded into one compound or composite mass, or were joined and united in one joint mass of supply, then, the piece of silver which we now call a dollar, could not equal the gold dollar for there would no longer be two metals, but only one, and there would be no longer one piece of silver coined into one dollar, and one piece of gold coined into another dollar, but there would be one piece coined out of the mixture of silver and gold metals, so that the demand would be upon the compound metal, and the coin would be composed of a compound of the two metals in the fixed proportions, or, to state the same thing in a different form, it would be composed of both silver and gold, jointly, in the fixed proportions. In the case of such a compounding or joinder of the two metals, if the one metal, silver, for instance, fell in value, then, though the whole compound or joint mass of supply would not fall as much proportionately as the silver alone did, yet it would fall in value as much as the silver

fell, but, it would be the silver, and the silver alone, and not the gold, which fell; the market value of the supply of silver outside of the compound or joint mass would fall, and the market price of gold outside would remain unaffected, and in this case the value of the money would be controlled exclusively by the market value of the metals respectively.

Because both silver and gold circulate upon an equality in the circulation is no reason for treating them as being joined or compounded into one compound or joint mass of supply. Each metal has its own separate and several supply; each is separately taken out of its several supply; each is separately coined; and each is separately used; there is never any joinder or any compounding. There is nothing more than the use of both metals in the circulating medium. Because wheat is used to make wheat bread, and Indian corn is used to make corn bread, and both kinds of bread are eaten, furnishes no reason for treating all the wheat and all the Indian corn as being in one compound or joint mass of supply; nor would it make the case of the wheat and Indian corn any stronger, if the law enacted that sixteen loaves of the Indian corn bread should be equal, for the purpose of sustenance, to one loaf of wheat bread, or that sixteen loaves of the Indian corn bread should be equal in value to one loaf of wheat bread. Fixing either one or both of these ratios between the two different breads, would never justify anyone in treating all the wheat and all the Indian corn as being in one compound or joint mass of supply, and there is not one whit more reason for

treating the silver and the gold as being in one compound or joint supply.

Silver, gold, paper money, nickel and copper, comprise our circulating medium. Nickel and copper are coined at a certain ratio between them and silver, or between them and gold; all are circulating at fixed ratios. As well say that all these are compounded or joined into one compound joint mass of supply as to say that silver and gold are.

Since there is no such thing as a joint supply, there can, of course, be no such thing as a joint demand. But any such joint supply and joint demand, if there were any, would be wholly at variance with the bimetallic theory. That theory is that bimetallism, by creating an increased demand for the falling metal will increase its value, while the corresponding decrease of the demand for the dearer metal will decrease its value, holds the market ratio between the two metals firmly up to the legal ratio. This is a several demand upon each metal severally, and not upon both metals jointly as joined together in one mass of supply. A joint demand upon a joint or compound supply of the two metals would defeat the very object of bimetallism, and there would be no opportunity left for its compensatory action; because, such a joint demand upon such a joint or compound supply would have the effect, not to increase the value of one metal (the one which was falling), but to increase the value of the compound or joint mass of both metals. Such a demand upon such a supply would not hold the market price of the two metals up to the legal ratio, and a several

demand for the metal which was falling would be impossible as against the compound or joint mass of supply of both metals. They are therefore contradictory to, and subversive of, the principle of bimetallism, and it would not secure the stability of the value of the two metals, but would leave each metal to be governed, wholly, by its own conditions of supply and demand. And furthermore there is not, therefore, under bimetallism, any such thing as a joint, or a compound, mass of supply of silver and gold; there is not such a thing as a joint demand upon any such compound, or joint, supply; and there is not any such thing as an indistinguishable fall or rise in the two metals, or a rise or a fall in the two metals indistinguishably; if there were, how would bimetallism know upon which metal to direct its demand, in order to raise the value of the falling metal, and depress the value of the rising metal? Evidently the bimetallist does not wish to be understood as meaning just what he says, when he speaks of joint and compound masses of supply, and joint demands. What the bimetallist really means, and what he says, too, is that:

"By generating a compensatory action between the two, by which the cheapening metal shall receive a larger use, while the appreciating metal drops partially out of its former demand, thus making the two fall together if they must fall, or rise together in the opposite case." "Making the tendency of the one to fall precisely counteract the tendency of the other to rise."

But this is nothing more nor less than the bimetallic

economic force which holds the market values or ratio, of the two metals up to the legal ratio. This theory has already been disposed of and shown to be unsound and untrue. And so it appears that there is nothing in the second claimed benefit.

The third claimed benefit is, that by increasing the volume of money it will cause a rise of prices, which will stimulate activity in trade and business.

This benefit need not detain us very long. It is nothing more than the old quantity-of-money theory. In the fifth chapter of the first part of this work it has been shown that the volume or quantity of money has no influence upon prices, unless the money be depreciated, and it would only be a waste of time to repeat the argument here. Now, the alleged increased activity in business, is said to be the result of the increase in prices, caused by the increase in the quantity of money, through bimetallism; but the quantity of money has no influence on prices, so that neither the increased quantity of money nor bimetallism has anything to do with stimulating activity in business.

Here the great inconsistency and contradiction in the bimetallists' contention become so plainly apparent that it is a matter of surprise that none of them perceive the inconsistency and the contradiction in their position. They first claim that bimetallism is practicable because the market ratio between the two metals will be held up to the legal ratio by means of an economic force, or compensatory action, which will cause an increased demand for monetary purposes for the metal which tends to de-

cline in its market value, and this increased demand will cause the market value of the cheaper metal to rise up to the legal ratio; and that the increased demand for the cheaper metal will cause a decreased monetary demand for the dearer metal, which decreased demand will cause it to fall to the legal ratio. Again, we have seen that in the second benefit claimed for bimetallism, it is claimed that it will secure a higher degree of stability in the mass of money, which is brought about by this same economic force, or compensatory action, by which there will be an increased monetary demand for the cheaper metal, and a decreased monetary demand for the dearer metal, which increased and decreased demand will hold the market value of both metals stable at the legal ratio. And yet when we come to the third benefit claimed for bimetallism we find that this benefit is to come from the increased volume of money, which will cause a rise of general prices, which in turn will stimulate trade, etc. That is to say, that the increase of money will increase general prices, that is, reduce the value of money—decrease its purchasing power. From which it necessarily follows that the greater the quantity of the metals which are coined into, and used as, money, the less the metal and the money will be worth, the more it will fall in value. First, they claim that the more of the metal used as money, the greater will be the value of the metal,—the greater will be its purchasing power; and, secondly, they claim that the greater the quantity of the metal used as money, the less valuable the money and the metal will become.

After all the declamation, emphasis, and fine phrases we find that there is no real improvement or benefit to be expected from bimetallism. We have found that there is nothing but an emptiness in bimetallism, in its system, and in its professions. It has been shown to be incapable of doing any good; but it does not follow from that that it is incapable of doing a great deal of harm, for it is.

§ 7. Suppose, however, that I am mistaken in my conclusions, and that bimetallism, if adopted, would bring about all the benefits claimed for it, the question whether it will be prudent and advisable to change our present monometallic system and adopt bimetallism, still remains to be answered. To properly answer this question involves a consideration of its benefits and disadvantages.

The first benefit claimed for it is that it will establish an approximate par of exchange between us, a gold-using country, and the silver-using countries. Now, a par of exchange with other countries is of course a benefit and an advantage, but it is to be remembered that the exchange would not necessarily always be at par with the silver-using countries, even if we were bimetallic. There is always more or less fluctuation in the exchange, and it always requires some calculation to arrange it. Without bimetallism, when silver reaches its natural level of price, which is must soon do, the exchange will approximate par as nearly as it will with bimetallism. The chances of loss by a change or fall in the value of silver before the time of payment under a time contract is no more than the same risk which every man runs under

a time contract; the goods which he has agreed to purchase may greatly decline in value before the time of delivery arrives, and he must, of course, bear the loss. Likewise, by a change of the money system, by which a depreciated dollar was made a legal tender for the payment of debts, a creditor might suffer loss. Besides, the far greater portion of our trade is domestic, and much the smallest portion of it is foreign, and much the smallest portion of our foreign trade is with the silver-using countries.

It is clear that the real benefit, so far as a par of exchange is concerned, will not be very great, and it would not require a very great inconvenience to overcome all the advantage to be derived from it.

The second alleged benefit is that bimetallism will secure a higher degree of stability in the compound mass of money—that is, a greater degree of stability in silver and gold. The fluctuations in gold have not been frequent nor extensive for many years, and even if bimetallism would tend to make the variations in the value of gold less extensive, it would, at the same time, tend to make the variations more frequent. This is conceded. It is an open question whether it is better to have fewer, but more extensive, variations in value, or more, but less extensive, variations. The merits and the disadvantages of both are so evenly balanced, that it makes it exceedingly doubtful whether bimetallism would in this regard be of any benefit at all. There is certainly not enough of benefit to be expected from it

to induce any people to incur the risk of any possible disadvantage which might result from its adoption.

The third benefit claimed is that it will increase the volume of money, and this will stimulate activity in trade—that is, that the metallic inflation will cause activity in trade. Inflation means depreciation of the money. It is extremely doubtful whether the activity in trade which is promoted or stimulated by a depreciated currency is a benefit. It is not, because it always has produced an unnatural demand and has encouraged an unnatural increase in the supply, and these are always followed by a collapse or panic, and cause far more loss and misery than can possibly be overcome by any possible benefit which may arise from the temporary activity in business.

In considering the alleged benefits of bimetallism the probable continuance of these benefits is an item to be taken into account. We have seen that neither the national nor the international bimetallist proposes that the legal ratio shall be fixed at the market ratio, but both insist that silver be rated much higher in the legal than it is in the market ratio. According to the principles they have laid down, this overvaluation of silver would cause a withdrawal of all the gold at once from the circulation. If this should occur, and it is more reasonable to expect that it will, than to expect that it will not, simply because it is natural, and it always has so taken place; at any rate if it occurs, then that would be an end of bimetallism. But the bimetallist assumes, and I have never yet found out upon what fact or

principle he bases his assumption, but no matter, he does assume, that the fixing of the ratio by law, and the rating of silver above and of gold below their respective ratings in the market ratio, will cause the market value of silver to rise and the market value of gold to fall until both meet at the legal ratio. Just wherein this attractive force, which draws silver to it from one direction, and gold to it from another direction, lies in the legal ratio, or what makes the legal ratio such a powerful magnet, has never been divulged. It is a trade secret which the bimetallist sacredly keeps to himself, in the doing of which he is neither magnanimous nor patriotic. However, we will suppose bimetallism fairly launched; the question is, how long will it continue? Until one metal or the other becomes undervalued or overvalued in the legal ratio; in other words, until the market ratio diverges from the legal ratio, and no longer. We have seen that even in France it took but comparatively a few years for either the gold or the silver, as the case might be, to be withdrawn from circulation. We have seen that France was practically silver monometallic from 1820 to 1850, and was gold monometallic from 1851 to 1864. It is therefore entirely safe to predict that it would be but a few years after bimetallism was fairly launched until all of the one metal—in this case it would be the gold—would be withdrawn from the circulation, and as soon as this would happen, we would become silver monometallic, and we would not enjoy a single benefit from bimetallism. We would have a par of exchange with the silver-using countries, but

a broken par of exchange with the gold-using countries. We would have no greater stability in the value of silver than just what its own conditions of supply and demand gave it. And we would have no stimulated activity in trade.

On the other hand, it is a foregone conclusion that the mere prospect of the adoption of bimetallism will precipitate a financial panic of such magnitude as the world has probably never seen: all the values will be disturbed, ruin and destruction of business and business enterprise will become the prevailing condition. As silver is confessedly to be overvalued, it follows, even according to bimetallic principles, that all the gold will be forthwith drawn from the circulation, and we will become silver monometallic, and worse off than we are now, for we will be condemned to the use of the worst money. Business will be paralyzed; contracts will be violated; debts will be paid in a depreciated currency, and all trust and confidence will vanish. These are not mere disadvantages, they are positive injuries. But suppose that we get through with the initial troubles, and that we even do so without driving gold out of the circulation, and in the course of time confidence is restored and business begins to revive, what then? Then, as soon as the market ratio between gold and silver changes, two or three per cent. from the legal ratio against silver we must, by virtue of the effect of the bimetallic law, fall into silver monometallism. We will remain silver monometallic until another change takes place in the market ratio of silver and gold—this time against gold—when we will fall into

gold monometallism, prices and values will be again disturbed, and we must again go through the same business disturbances and depressions, and so on; nothing but incessant alternations and changes in the measure of values causing always the same business disasters followed by the same business depressions, uncertainties, and losses. I repeat that these results are not mere disadvantages, but they are positive injuries, and will be serious calamities, as compared with which all the benefits claimed for bimetallism are trifling and insignificant.

The preponderance of the disadvantages, and of the positive injuries which will follow from the introduction of bimetallism, over the benefits claimed for it, is so manifest and so great that further comment is unnecessary.

CHAPTER II

SYMMETALLISM

§ 1. Mr. Francis A. Walker, in his work entitled *International Bimetallism*, page 206, etc., describes symmetallism as follows:

"The views and practical proposals of Prof. Alfred Marshall, as offered to the Commission, constitute one of the most important contributions to the theory of metallic money which have been made during the great debate. As between gold monometallism and bimetallism in its familiar form, Professor Marshall is wholly on the latter side. But this eminent economist thinks there is 'a more excellent way.' What we know as bimetallism he terms 'fixed-ratio mintage,' denying it the title bimetallism, which, in his opinion, 'means that the payment of every debt shall be effected by the delivery of certain amounts of *both metals*, or of paper which represents them.'[1] Professor Marshall proposes the government issue of certificates, each certificate standing for a certain amount of gold and a certain quantity of silver bearing a legally adopted ratio to the gold. Were the French ratio to be taken, a certificate would stand for one part of gold and fifteen and a half parts of silver, actually deposited and remaining in trust for the redemption of the certificate, whenever desired. A money thus

[1] Herschell's Commission, Appendix to Final Report No. 9705.

composed, Professor Edgeworth compares to a *linked bar* of silver and gold. The essential distinction between this and French bimetallism he characterizes as follows: 'The arrangement that there should be a *joint demand* for gold and silver money might, perhaps, be called *symmetallism*, to distinguish it from the arrangement that there should be a *composite supply*, which is called *bimetallism*.' Professor Marshall's proposal has received much attention."

We may, possibly, obtain a clearer understanding of what Professor Marshall's proposal is, by supposing that a coin was actually coined out of composition of gold and silver, according to an adopted ratio. Suppose that the ratio adopted was 16 of silver to 1 of gold; our gold dollar contains 23.22 grains of pure gold, and our silver dollar contains $371\frac{4}{16}$ grains of pure silver; then further suppose that a new coin was struck out of this mixture of gold and silver, containing 11.61 grains of pure gold and $185\frac{6}{16}$ grains of pure silver, and that this coin were christened "one dollar." This is Professor Marshall's proposal, except that he, instead of having a metal coin actually coined, proposes that the owner of both silver and gold shall deposit that silver, and gold in the mint, and for every 11.61 grains of pure gold, and $185\frac{6}{16}$ grains of pure silver so deposited he shall receive a certificate to the amount of one dollar; which certificate represents the metal deposited, and is to pass in the circulation as money the same as coins made out of the mixture of gold and silver, in the same proportions, would pass in the circulation.

The advocates of symmetallism base their claim

of the superiority of their system over bimetallism upon the two following reasons:

(1) That it will be more permanent, inasmuch as the metal which tends to become dearer cannot be withdrawn from the circulation, as it can under bimetallism, and, under which withdrawal from the circulation, bimetallism must break down.

(2) That it will impart greater steadiness to the value of the standard—that is, that the value of the compound money of mixed gold and silver will be steadier than the separate gold dollar and the separate silver dollar will be under bimetallism.

Of course no one should make positive predictions as to how any proposed system, particularly a monetary system, which has never been tried even experimentally, will work after its adoption; still, it can do no harm, and possibly may do some good, to inquire somewhat into the probabilities of the permanence, the advantages, and the disadvantages of the proposed system.

(1) The symmetallic ratio is not a ratio of value like that of bimetallism. The symmetallic ratio is a ratio of quantity; that is, the law simply provides that a certain number of grains of gold, and a certain number of grains of silver shall constitute a dollar, but makes no attempt to fix the relative values of these two metals as it does in bimetallism. Under symmetallism, then, each metal would be governed, as to its value, entirely, by its own conditions of supply and demand.

If the ratio were fixed, say, at 16 of silver to 1 of gold, then that would depreciate the dollar from

our present standard from 25 to 30 per cent. This would practically be repudiation to the extent at least of 25 per cent., and even more, of all debts, so that to be honest the proportion of silver to be put into the dollar would have to more than double 16 to 1. The dollar must be made at least of 32 parts of silver to 1 part of gold.

The proportions of silver and gold which would then have to be deposited by the holder in the mint in exchange for certificates would be thirty-two ounces of silver to one ounce of gold. This is a much greater proportion of silver to gold than ever the production of silver has been to gold, and it is fairly open to question whether that proportion of silver to that of gold would be brought to the mint at all to be exchanged for certificates; if not, then the system would break down right in the mint.

On the other hand, if the proportion of silver to that of gold were made less than the market ratio, say at 16 to 1, the holder of gold might refuse to mate his gold with the silver at that ratio, and hence neither would be taken to the mint. The weakness of bimetallism is that it breaks down after it has been in operation; the danger of symmetallism is that it may break down before it ever gets fairly into operation. Under symmetalism the coinage is, of necessity, limited, because the certificates could only issue upon the actual deposit of both silver and gold at the adopted ratio. Certificates could not issue for gold separately, and for silver separately. One danger in the proposed system is that a person who held silver alone might not be willing to go to the

expense of purchasing gold to mate with his silver at the mint; and so the holder of gold alone might not be willing to incur the expense of buying silver to mate with his gold at the mint; in which case the silver, or the gold, as the case might be, would not be put into circulation at all. As soon as the holder of silver was not satisfied with the rating of silver in the ratio, he would refuse to deposit his silver with the gold, and as soon as the holder of gold was dissatisfied with the rating of gold he would decline to deposit his gold with the silver, and of course the system would break down when there was no longer silver and gold deposited at the mint in the proportions fixed by law. It will thus appear that the permanence of the system is by no means secure. Possibly it might turn out to be more permanent than bimetallism, but it is impossible that it might be more permanent than monometallism. It is clear, then, that symmetallism would be of no advantage over our present monetary system on account of permanence, while, on the other hand, it might, on account of its want of permanence, be a positive disadvantage. This leaves but the one further question to be considered in our investigation: whether it would be advantageous to change our present monetary system, and adopt symmetallism. That question is, the possible greater steadiness in the value of the standard.

(2) If we suppose a coin to be struck out of the compound of silver and gold, at the ratio of, say, 32 of silver and 1 of gold, which coin was called a dollar, then, if the value of one of the metals, silver, for

instance, declined, say, 10 per cent; while the silver would, in fact, have declined 10 per cent., yet the value of the coin would only fall 5 per cent. This is the principle under which it operates. It spreads the loss which, under separate coinage, would have fallen only upon the silver, over both the silver and gold; but the calculation of just what the joint decline in value of both gold and silver would be in a case of this kind, will be found to be very often a matter of much nicety and of some practical difficulty. The above example assumes that the value of the 32 parts of silver is exactly equal to the value of 1 part of gold in gold. But suppose a case where the values of the silver and gold in the coin were different, as, for instance, that a dollar were coined out of 11.61 grains of pure gold, and $185\frac{6}{16}$ grains of pure silver, and that the silver in the dollar was only worth half as much as the gold in the dollar, then the value of that dollar would only be $\frac{3}{4}$ as much as our present gold dollar; and, then, suppose further, that silver fell 10 per cent. in value, and gold remained at the same value, then, though the silver in the dollar would have depreciated 10 per cent., yet the value of the whole piece of money would only have depreciated $3\frac{1}{3}$ per cent. On the other hand, if the value of silver had remained stationary and the value of gold fell 10 per cent., then, though the gold in the dollar would have depreciated 10 per cent., yet the value of the whole piece of money would only have depreciated $6\frac{2}{3}$ per cent. And so the same percentage of change would arise in case the value of either one of the metals increased, and whatever the per-

centage of the increase or decrease in the value of either metal might be, the change in the value of the whole coin would be proportionately the same as are given in the above examples; but the proportionate depreciation of the whole coin will, of course, depend upon which of the metals—the cheaper or the dearer—has declined in value, and also upon the relative values of each of both of the metals contained in the coin. These examples exemplify how symmetallism is expected to make the standard more stable, and it will be observed that it may require some quite abstruse calculations to determine what the coin—the dollar— is worth in gold. And again it is to be remembered that while the change in the value of the whole coin under symmetallism may not be so great, as the change in the one metal, yet the changes will occur much oftener, for the value of the coin would of course change with every change in the value of either of the metals in it. In considering the expediency of adopting bimetallism, symmetallism, or any other monetary system, it must not be overlooked that gold is the standard of value, and will remain so until the commercial world sees fit to make a change. Whatever, then, the monetary system may be, the value of the money in use, and prices will be rated in gold, and will be subject to the same variations as the variations in gold.

The simpler a monetary system is, the better it is; and, since gold is the standard of value, the more readily the value of the money in actual use can be ascertained by a simple comparison with the

value of gold, the more satisfactory the system will be. If all the money in use be held at a parity with the money coined out of the commodity which is the standard of value,—gold,—then the system is in its simplest form. The system is then entirely harmonious, and there never can be any difficulty in ascertaining the relative values of other things, for the measure of value is determined and fixed by the value of a given quantity of gold. The gold dollar is a piece of gold in which the weight of pure gold is 23.22 grains. People become accustomed to attaching a value to that piece of gold, for the purpose of comparison with the value of other commodities, and if every other dollar in use were kept at par with this gold dollar, then the system would be harmonious; there would be no difficulty in referring other things to the value of gold, in order to ascertain their price; the value of the measure of value would be as stable as the value of the standard of value, and, so far as the influence of money on prices is concerned, these would be subject only to the variations in the value of the standard. Now, of course the symmetallic dollar would be referred to gold in order to ascertain its value; the value of the silver in that dollar would be rated in gold. We have seen that the matter of calculating just what the symmetallic dollar is worth in gold under all possible conditions is rather difficult. At all events it is not simple by any means. Consequently, we would not have, in symmetallism, a harmonious system, and it would be a matter of some difficulty to determine at all times what the dollar was worth in gold, and, therefore, there would

be no reliable or certain measure of value. This uncertainty of the relative value of the dollar with gold, and the difficulty of always being able to calculate what that relative value is, would be a very serious objection to symmetallism, and it would, doubtless, cause a very great deal of inconvenience in the transaction of business, for it would cause great frequency in the changes of prices, and the extent, or what should be the extent, of these changes would always be vexatiously uncertain. In fact, the principle that all the money in use in any country should be always kept at par with the standard, is so important that it may be said to be fundamental, and the fact that the symmetallic dollar would not at all times be kept at a parity with gold, would create disadvantages, which would, probably, outweigh all possible advantages to be derived from the adoption of the system, rendering its adoption of extremely doubtful expediency.

Another thought occurs in this connection, and that is, the possiblity that the proposed system will unduly encourage the traffic in the precious metals. Say that the ratio fixed by law were 16 parts of silver to 1 of gold, then the owner of 96 ounces of silver could not have his silver coined, nor could he get certificates for it until he deposited with his silver 6 ounces of gold. This would drive him into the market to buy gold. Likewise the holder of gold would be compelled to purchase silver for the same purpose. Both metals are used in the arts. A manufacturer may require a certain quantity of gold; he could not go to the mint and purchase gold alone

with his certificates. He would have to take both silver and gold. A debtor requires a certain amount of gold to pay his debt, or the interest on it. He could not procure this gold from the government without taking the silver with it, and he would have no occasion at all for the silver. Both the manufacturer, and the debtor, and, also, the holder of one of the metals who desired to have it coined, would then be driven to the bullion dealer. Now, as the bullion dealer would be compelled to take into consideration, in determining his profits, the contingency that he might be left with a stock of the one metal on hand, without any of the other metal to mate with it at the mint, he would be forced to add enough to his prices to indemnify him against any loss in respect of this contingency; this added to his ordinary profit would probably keep the price of bullion above that of the money, and the metal for which there happened to be the most demand would rise in its relative value to the other metal; and, in this way, symmetallism, instead of holding the market values of the two metals more stable, might be the means of causing greater, and more frequent, variations in the relative values of the two metals than there ever has been. A condition under which the value of bullion is either greater or less than the value of money coined out of, or based upon, it is always unfortunate and inconvenient, sometimes even disastrous. It unsettles the measure of value, and, consequently, unsettles prices. The expediency of adopting symmetallism may be considered under various other aspects, but

I think the foregoing considerations are sufficient to cause one to hesitate before adopting the system.

Changing a monetary system after it has once become established and thoroughly understood by the people is a serious business indeed, and should never be resorted to unless a decided benefit were certain to follow, and the benefits should be great enough to far outweigh even the temporary disadvantages caused by the change. The foregoing considerations would at least seem to show that the introduction of symmetallism would not bring with it enough advantages to compensate for its disadvantages.

CHAPTER III

OF THE TABULAR STANDARD OF VALUE

§ 1. FROM time immemorial political economists have discussed the evils of the variations in the values of the precious metals, and their unsuitability, on this account, for use as either a measure, or standard, of value. Many different schemes have been proposed, and the adoption of many different kinds of standards has been, from time to time, suggested, but the one which at present seems to be regarded with the most favor is that spoken of by Professor Jevons in his work, *Money and the Mechanism of Exchange*, page 328, etc., as Lowe-Scrope Tabular Standard of Value. Mr. Jevons explains this standard as follows:

"To carry Lowe's and Scrope's plans into effect, a permanent government commission would have to be created, and endowed with a kind of judicial power. The officers of the department would collect the current prices of commodities in all the principal markets of the kingdom, and, by a well-defined system of calculations, would compute from these data the average variations in the purchasing power of gold. The decisions of this commission would be published monthly, and payments would be adjusted in accordance with them. Thus, suppose that a debt of one hundred pounds was incurred upon

the 1st of July, 1875, and was to be paid back on the 1st of July, 1878; if the commission had decided in June, 1878, that the value of gold had fallen in the ratio of 106 to 100 in the intervening years, then the creditor would claim an increase of six per cent. in the nominal amount of the debt.

"At first the use of this national tabular standard might be permissive, so that it could be enforced only where the parties to the contract had inserted a clause to that effect in their contract. After the practicability and utility of the plan had become sufficiently demonstrated, it might be made compulsory, in the sense that every money debt of, say, more than three months' standing, would be varied according to the tabular standard, in the absence of an express provision to the contrary."

Mr. Francis A. Walker gives a complete description of the scheme in his work entitled *Money, Trade, and Industry*, page 70 *et seq.*, as follows:

"The schemes particularly referred to are those of Messrs. Lowe and Scrope in England, and of Count Soden and Professor Roscher in Germany, which all propose, under different forms and conditions, a Tabular Standard, or Multiple-Tender, in which the value-variations of a considerable number of articles of general consumption and of prime importance in the economy of daily life—corn, beef, potatoes, wool, cotton, tea, coffee, sugar, timber, iron, coal, etc.—shall be trusted to compensate each other, with the result of a high degree of stability in the whole body so composed. The articles selected should be taken in definite quantities, and all of standard quality. An arbitrary name might

be given to a Unit of this measure, which would embrace a certain number of pounds, bushels, or yards of each one of the articles on the list. Any person selling a house or a farm might then fix the price at so many of these Units, corresponding to the present value of a bill of goods of such commodities, in such quantities.

"The seller would thus be assured of being placed at the end of the term of credit in substantially the same position as if he had been paid at the time of the purchase. If one, three, or five of the articles taken should be found to have risen in value in the interval, others, doubtless as many, would be found to have fallen, and in the aggregate to an equal extent. Exceptional causes, over so large a field of operations, would practically offset each other, with a result of complete justice, as between the two parties to the contract.

"But as it might be inconvenient to the non-commercial creditor to receive ten years, hence, a number of cart-loads of goods of one or two score of kinds, representing the animal, the vegetable, and the mineral kingdom, and to be obliged to dispose of these for himself, it should be stipulated that the debt should be paid in current money —gold, silver, or paper—in such amount as would at then current prices purchase the bill of goods which had been taken as the measure of the claim of the creditor, of the obligation of the debtor.

"Of course, for the satisfactory carrying out of such a scheme, the sanction of government would be required. Commissioners would have to be appointed who should be empowered to make periodical publication, quarterly or monthly, of the prices of the several articles taken for this purpose, according to the rates prevailing in the principal or representative markets of the country. Such publication would embrace a computation of the value

in money of the Unit of the multiple-tender—that is, the commissioners would announce that so many pounds, bushels, or yards of the commodities on the list were worth at date so many ounces of silver or gold, or so many dollars of paper money. All payments falling due within the quarter, or the month succeeding, would be made in money, according to the terms of the announcement.

"To illustrate the operation of this scheme, let us suppose that in 1869 I sold my house or farm on a credit of ten years. The price of the property, as reached in the negotiation between the buyer and myself, was $6000. But instead of his giving me his note for $6000, we looked together at the official published list of prices for the multiple-tender, and found that the value of the Unit, embracing so much of each of so many articles, was at the time $12. The note was thereupon given for 500 units of the multiple-tender.

"On the note coming due the present year, my debtor and myself would refer to the last list published, dated just ten years after the one which formed the basis of the contract; and we should probably find that the value of the unit, in current money, was now higher or lower, say $11 or $13. That is, the same amount of the same articles could be purchased for one or the other of these sums, which could have been purchased for $12 when the note was given.

"The announcement is official, conclusive. No controversy is possible between us. The computations required are no more elaborate than those involved in casting up the semi-annual interest. I receive $5500 or $6500 in money, according as its value now is, and the transaction is closed. The effect of the introduction of the tabular standard has been to put me precisely where I

should have been had I received payment at the time of purchase. I get no more, no less, by changes in the value of any article. I am no worse off by reason of having given credit. On the other hand, the purchaser has had all the legitimate advantage of receiving credit without deriving any unjust advantage thereby, or being subjected to any penalty therefor, beyond the payment of the stipulated interest. He has no chance to get the house or the farm at last by paying me what is worth only half, or two thirds, what it was worth ten years ago; and he is likewise relieved from all danger of being required to pay me a third or a half more than he had reason to expect, through a change in the purchasing power of money which he could neither control nor foresee."

Mr. Walker concludes that this scheme would be of great benefit in case of long-standing obligations or permanent investments, and would be a great protection to those who depend upon such investments for their livelihood, to trustees, guardians, savings banks, and charitable institutions, having money to invest, etc. But, on account of the uncertainty of the amounts which might be due when the time of payment arrived, would not answer so well in short-time obligations used in the conduct of active business operations.

The scheme does not contemplate the disuse of money. Money is to be used for payment and also as a measure of value, after its introduction the same as it was before. The fact that gold would still, in any event, remain the standard of value must not be lost sight of. After the introduction of this tabular standard prices would still be liable to all the fluctua-

tions which may be caused by changes in the value of the measure of value, or by changes in the value of the standard of value, or by changes in the conditions of supply, demand, etc., relating to commodities themselves. Nothing would be changed in these respects. The only point where there would be any difference would be in the amount which might be required to discharge a debt. It relates wholly to payment, and the proposed system is not properly called a standard of value. It is not a standard of value. The standard and the measure of value remain the same as before. If this so-called tabular standard of value is a standard at all, it is a standard by which to compute the amount which may be required to pay a debt, and it relates entirely to the consideration of the contract, that is, to the amount required to be paid by the debtor to discharge him from liability under his contract. The price of the goods, however, for the purchase of which the debt was contracted, would be measured or expressed in terms of money, according to the standard of value just as they now are.

In considering, therefore, whether it is worth while to adopt any such system, it is to be borne in mind that the change and the only change it can effect is to regulate, in a manner, the amount of money to be paid in discharge of debts. It is, simply, a scheme for the liquidation of debts.

There are, of course, some difficulties in the way, which must be provided against before the scheme could be successful in its operation. The first thing which would have to be settled would be the number

of articles, and the particular articles which should be placed upon the list. This would not be readily determined; and no assurance could be given that there would be no changes made, some articles stricken out, and others inserted or added. The agitation for a change would be constant, and both creditors and debtors would either find their contracts constantly changed, or would be kept in perpetual dread of the contract being changed to the injury of one or the other. It is doubtful whether, on the whole, the proposed system would be as satisfactory as the present one.

The danger of counterfeiting the report of the Commissioners, or rather of publishing false reports, would be very great, and would be the means of working a great deal of mischief.

Any corruption in the Board of Commissioners would be most serious in its consequences, and it can be readily imagined that some debtors or some creditors could well afford to pay out a considerable sum to have a showing of increased or decreased prices and units during a particular month or quarter. And these commissioners' reports could readily be manipulated by any one who was an expert in juggling with figures.

There would be trouble in agreeing upon a mode of calculating, or of arriving at, the average of the general prices of the articles on the list. One school of economists would insist upon doing it one way, and another school would insist upon doing it in another way. It is to be feared that there would really be more agitation among economists on the

method of calculation under the tabular system, than there has been, and at present is, among them on the question of bimetallism and monometallism; and the differences of opinion would certainly be as great.

Supposing all these difficulties got out of the way, the question as to the dissemination of the report of the Commissioners among the people requires consideration. How is it to be done, in order that it may reach every person who wishes to sell or buy or who has to pay or receive a debt? It seems to me that this is a practical difficulty which, of itself, will make the successful operation of the scheme extremely doubtful. How is the government to send this report to every person who requires it, or, how is it to distribute the reports in such a manner as to enable every person who may have occasion to use them, to see them? Is a person every time he makes a sale or purchase, or pays or receives a debt to run to the post office, either in a city or in a rural district, before he makes the sale or purchase, or pays or receives the debt? This would be an intolerable burden and clog to business. Business could not be said to be free under any such system.

In case of a dispute between parties, how is the report of the Commissioners to be proved to make it evidence? Newspaper reports could not be accepted. True, the law might provide a mode of proof, but what will this mode of proof be? That is the important question. By analogy the evidence of the report, and the only evidence, would be a duly certified copy of the report. Making certified copies

of these reports for use in actions at law or in equity, from Maine to Texas, and from the Atlantic to the Pacific, might furnish employment to a great many clerks in the Commissioners' office, but it would be mighty expensive and inconvenient for the people in the transaction of their business. Of course some other mode of proof might be provided for, but any mode which would be a wide departure from the established rules of evidence in regard to the proof of public documents would be attended with grievous forgeries, frauds, and perjuries. It is a fair question whether, even considering this point alone, the system would not do more harm than good.

How is any government, national, state, municipal, or any other subdivision, to estimate the probable expenditures, and fix the amount of its estimates and its levy of taxes? Under this proposed system the amount which it will be entitled to collect when the time for the collection of taxes arrives may be entirely different from the amount of the tax levy. Public business could not be transacted under such changing circumstances. There are uncertainties and deficiencies enough now, without adding to the difficulties by rendering everything uncertain.

Of course it will very rarely happen that a person wants just the exact quantity of all the various articles on the list upon which prices and the Unit are computed. The person may be a dealer in some article not on the list, or he may be a dealer in but one of the articles on the list. Suppose he is a dealer in pork, and the report of the Commissioners would show a fall in general prices of ten per cent.,

but pork had not fallen in price, or had actually raised in price. The dealer in such a case would only collect $90 on a debt of $100 due to him; he would therefore be out $10, if he wished to invest in pork.

The system would throw great obstacles in the way of a man keeping proper books of account; nor could the business man at any time have a reliable balance sheet made up in order to determine what his profits had been, or what his standing really was, for the simple reason that he never could tell what amount he would realize on debts owing to him or what he might have to pay on debts owing by him. A dealer might be compelled to raise or lower his prices every month. These uncertainties would render the business situation intolerable. A bank could form no estimate of its assets to make them available. It would never know how much it may have to pay its depositors, and it could never estimate how much it would collect on its commercial paper. It is not at all likely that the system ever would be adopted in business generally.

Besides, the system would not on all occasions do exact justice between a creditor and his debtor, even in cases of long-deferred payments, such as long-time-running bonds. In these cases the interest is usually made payable semi-annually. Under what system would the interest be payable? If under the present system, then the debtor would always have the same amount to pay; if under the tabular standard the debtor would not know what he had to pay nor the creditor what he had to receive until

the time of payment came. Actual experience alone is probably the only thing which would determine which system would be most advantageous for both parties; but one thing is certain, and that is, the results of the system if adopted would not all be advantages; it would probably bring with it a train of disadvantages at least equal to the advantages. The system might, too, work great injustice in many cases whether of long or short credits. Of necessity the Commissioners' table or report which would be used in one month, would be the average general prices, and the Unit computed therefrom, for the previous month or quarter. Prices change very rapidly at times, and when the time of payment arrived in any given month or quarter, it might be, and probably often would be, that the general average of prices and the Unit had in fact been greatly changed. Suppose the time of payment be on the 30th day of April; the payment would be made according to the Commissioners' report of the month of March; on the 1st of May the Commissioners make another report showing a rise or a fall of general prices of 15 per cent. during the month of April. In such a case either the creditor or the debtor will lose 15 per cent.

Other objections to the proposed system suggest themselves, but the foregoing are sufficient to show that it will be, if adopted, of very doubtful utility.

I am unable to see the great injustice of the present system; at least in cases of the sale and purchase of commodities, and even of a house or a farm.

The owner of a commodity, horses, for instance,

agrees to exchange them with the buyer for another commodity, gold, to be paid or delivered at some future time. Why should he not take his chances upon the appreciation or depreciation of the commodity, gold, which he is to receive? A agrees to purchase one hundred head of horses from B at a certain price, to be delivered at the end of one year from the date of the contract, the consideration to be paid upon delivery of the horses. Delivery of the horses is tendered in due time under the contract. Now the purchaser is bound either to accept and pay for the horses at the contract price, even though horses may have fallen greatly in value in the meantime, or to respond in damages to the seller for the violation of the contract. Likewise the seller, B, is bound to deliver the horses at the price under his contract even though the price of horses may have greatly increased in the meantime, or else he must respond in damages to A for the violation of the contract. These are risks which parties run on all contracts for the future delivery of commodities, and I fail to see wherein there is any great injustice in the same risk under a future contract for the delivery of the commodity gold. In fact, I can see no difference in this respect between a contract to deliver horses in the future, and a contract to deliver gold in the future. Now this tabular standard system proposes that in the case of a contract for the future delivery of gold, the creditor shall receive an amount of gold which will enable him at the time of payment to purchase the same quantities of the goods contained in a particular list as

could have been purchased for the amount of the debt at the time it was created. That is, if the average prices had fallen or raised 10 per cent. in the meantime, and the debt was originally $500, the creditor must be satisfied with $450 or $550. But, if the 100 head of horses had been sold at $100 a head, or $10,000 for all, and horses had in the meantime fallen 10 per cent. in price, the purchaser would not be entitled to 110 head of horses for the $10,000, and, if the price of horses had risen 10 per cent., the seller could not discharge himself from liability under his contract, nor could he claim the $10,000 on the delivery of but 90 horses. In this case the parties are bound to accept and pay according to their contract, no matter how much the price of horses may have changed meanwhile. Why should not dealers be compelled under the law to take the same risks on the appreciation or depreciation of money that they are compelled to take in contracting for other commodities? In the case of the contract for horses, the parties would not be put in the same position they would have been had it been a cash sale at the time the contract was made, and the injustice in making either one of the parties take more or less is just as great as if there had been an actual change in the value of gold, caused by its own conditions of supply and demand.

For my part, unless some one can show me some advantages expected to follow the adoption of the tabular standard, which have not, so far, been developed, I cannot see that it is worth while to adopt that system.

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